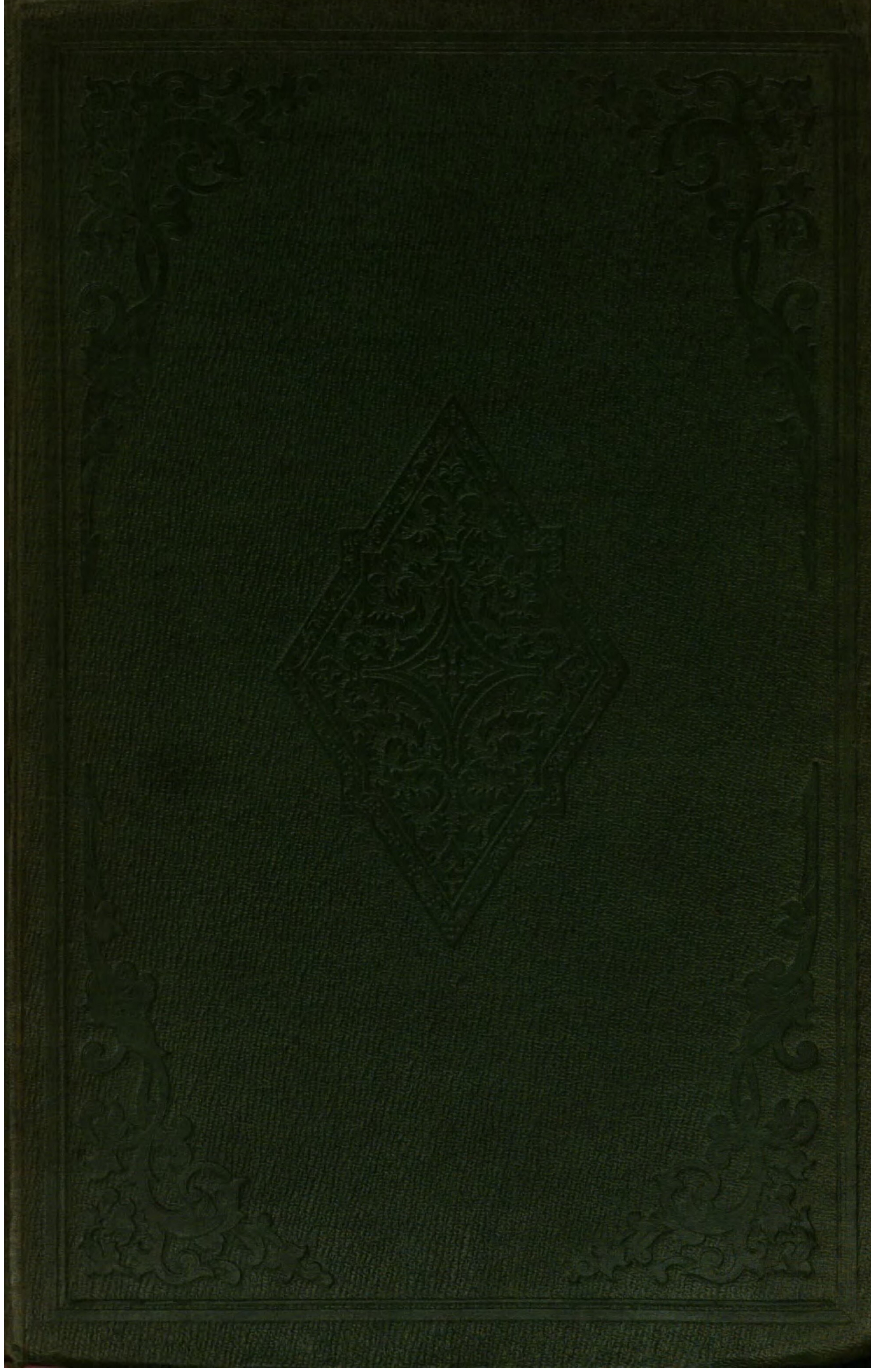




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GERANIACEÆ.

THE

NATURAL ORDER

OF

GERANIA,

ILLUSTRATED BY COLOURED FIGURES AND DESCRIPTIONS;

COMPRISING

THE NUMEROUS AND BEAUTIFUL MULE-VARIETIES CULTIVATED IN
THE GARDENS OF GREAT BRITAIN,

WITH

DIRECTIONS FOR THEIR TREATMENT.



BY ROBERT SWEET, F.L.S.

Author of Hortus Suburbanus Londinensis, Botanical Cultivator, &c. &c.

VOL. II.

LONDON:

PRINTED FOR JAMES RIDGWAY, PICCADILLY.

1822—1824.

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BOOKS QUOTED IN THE SECOND VOLUME,

IN

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Colv. catal. ed. 2. A Catalogue of Plants sold by James Colvill, Nursery and Seedsman, King's Road, Chelsea, near London. The Second Edition. 1823. 12mo.

Dietr. Nachtr. J. G. Dietrich. Nachtrag zu in werterbuch der Botanik und Gärtenrei. 8vo. Berlin.

Link enum. plant. H. F. Link Enumeratio Plantarum Horti regii botanici Berolinensis, altera. 2 vol. 8vo. 1821-1822.

Tenore, Flor. neap. M. Tenore, Flora Napolitana. Fol. Napoli, 1811, et seq.

Tenore Hort. reg. neap. Catalogo delle piante del regal giardino bot. di Napoli.

Wendl. coll. Collectio Plantarum tam exoticarum, quam indigenarum, cum delineatione, descriptione, culturâque earum à J. C. Wendl. Vol. 2. Hanover, 1809, 1810. 4to.

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Cole, ed. 2. A Catalogue of Plants sold by James Cole,
Nursery and Seedman, King's Road, Chelsea, near London.
The Second Edition. 1828. 12mo.

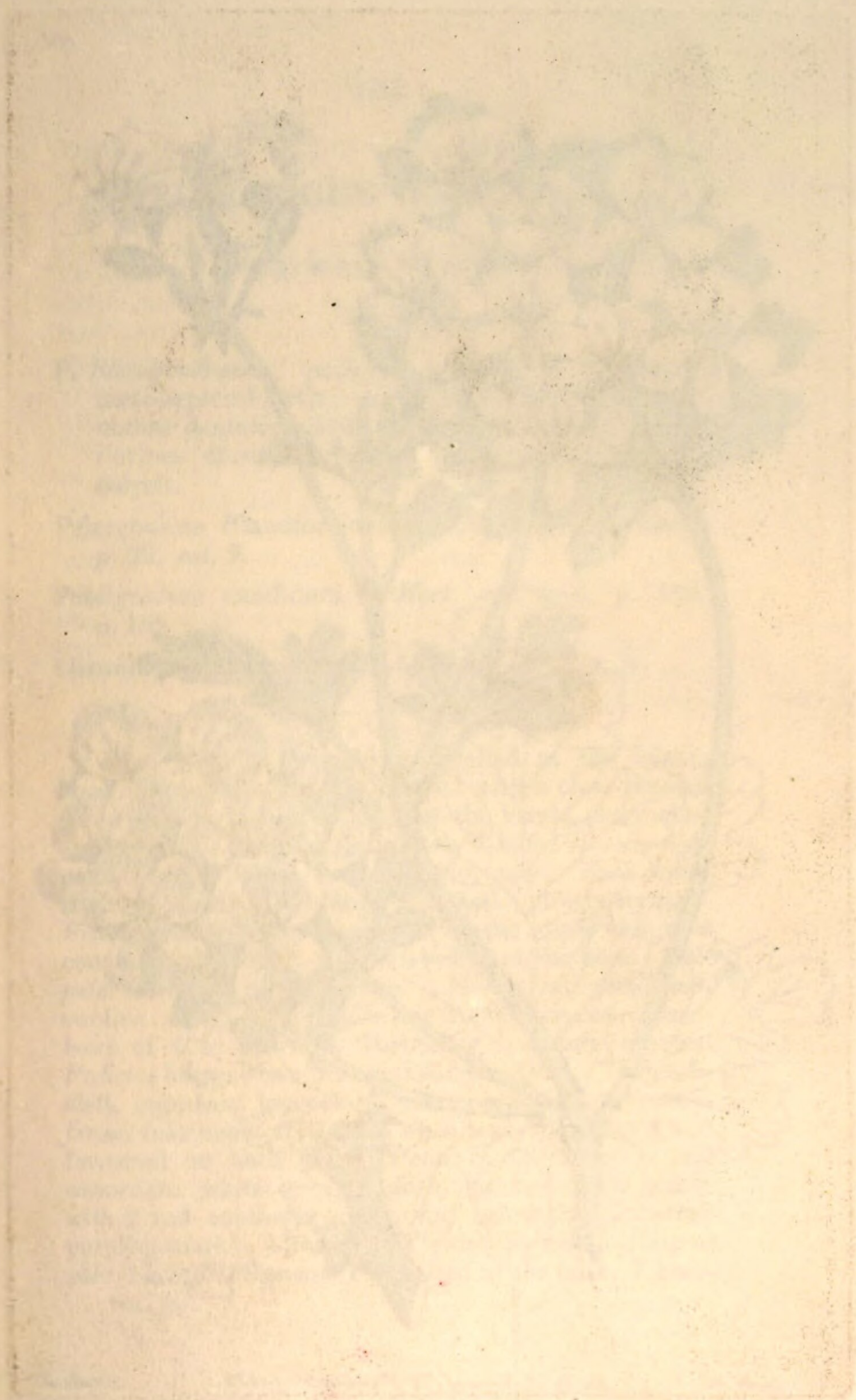
Dier. Nachr. J. G. Dietrich. Nachtrag zu in weiterhau der Botanik
und Gartenk. 8vo. Berlin.

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E. D. Smith. del.

Publ. by J. Ridgway 170 Piccadilly Feb. 1. 1822.

J. Watts. sc.

PELARGONIUM Blandfordianum.

Hoary-leaved Stork's-bill.

P. Blandfordianum, umbellis multifloris, foliis palmato-septemlobatis; segmentis pinnatifido-incisis obtuse dentatis planis canescentibus, petalis superioribus obcordatis, tubo nectarifero longitudine calycis.

Pelargonium Blandfordianum. *Nob. in Colv. Catal.* p. 22. col. 2.

Pelargonium candidum. *Hort. sub. lond.* p. 152. n. 135.

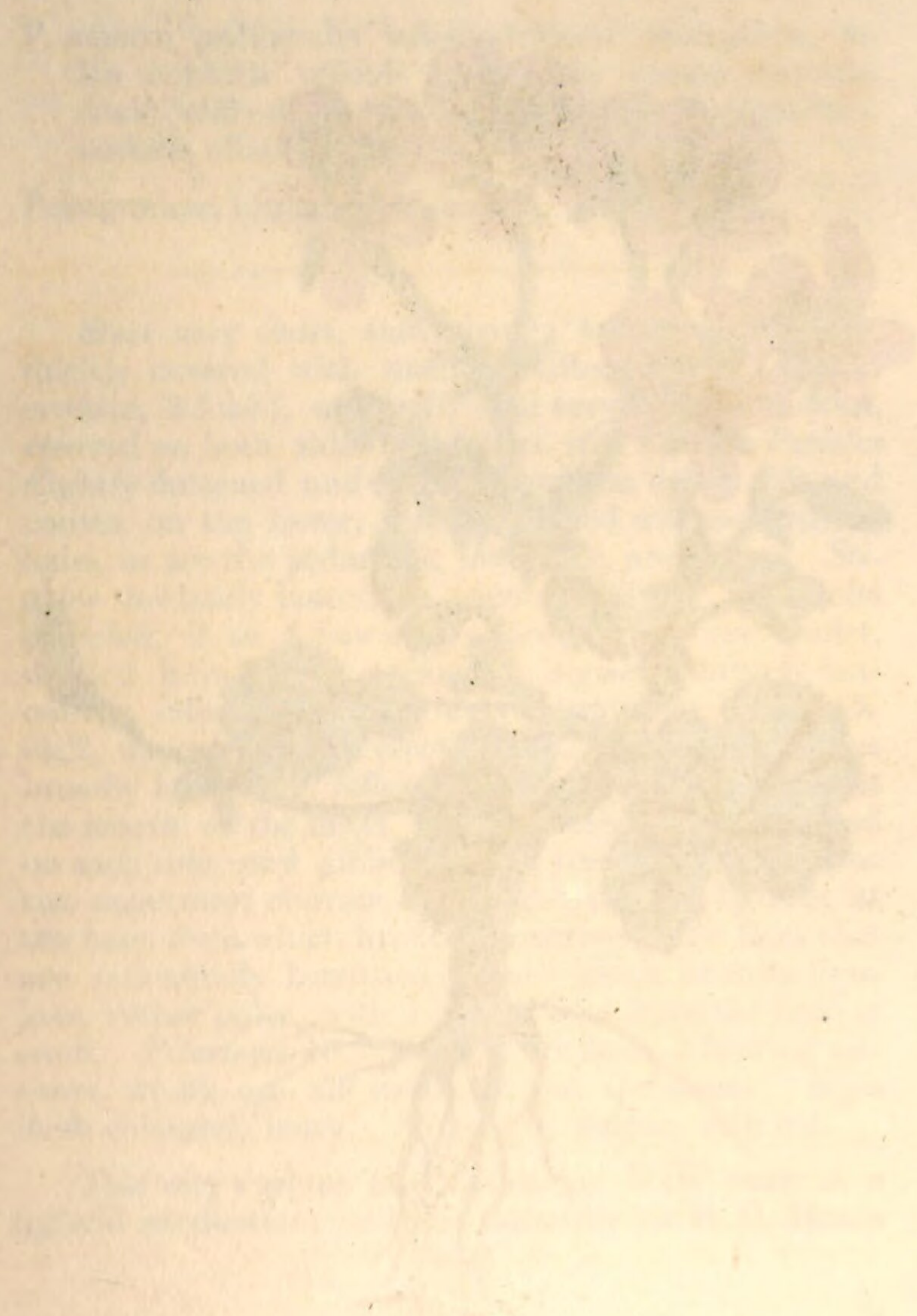
Geranium Blandfordium. *Andrews's geran. c. ic.*

Stem shrubby, branching, swelled at the joints; *branches* roughish, thickly clothed with a close-pressed white powdery pubescence, as are the leaves, peduncles, and calyx. *Leaves* flat, palmately 7-lobed; lower segments deeply lobed or pinnatifid, upper ones more slightly lobed, all bluntly toothed, strong-scented. *Petioles* flattened and furrowed on the upper side and convex on the lower, a little swollen at the base. *Stipules* cordate, acute, ciliate. *Peduncles* cylindrical, swollen at the base. *Umbels* many-flowered. *Involucre* of 6 or 7 widely lanceolate, concave bractes. *Pedicles* longer than the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, erect, bluntish. *Nectariferous tube* about the length of the calyx, flattened and furrowed on both sides. *Petals* 5, the 2 upper ones obcordate, white or pale blush, marked in the centre with 2 red confluent spots, and below that are other purplish marks; lower petals widely ligulate, white or pale blush. *Filaments* 10, united at the base, 7 bear-

ing anthers which are always sterile. *Germen* villous. *Style* pale blush, hairy below, and smooth on the upper part. *Stigmas* 5, pale red, reflexed or revolute.

We suspect this very curious plant to be a mule between plants of two different sections, perhaps *P. graveolens* and *P. cortusæfolium*, or *echinatum*. We should have thought it a species, if its stamens had not been always imperfect. We have never been able to fertilize it, though set with the pollen of several kinds; another proof of its hybrid origin. It is a plant well worth cultivating, being an abundant flowerer; and having no inclination to seed, the flowers last in perfection for a considerable time; so that the whole plant is often covered with flowers. It was thus when our drawing was taken at the nursery of Messrs. Colvill last summer. It is a very hardy free-growing plant, and thrives well in a mixture of sandy loam and peat, or any light vegetable mould; and cuttings root readily if planted under hand-glasses, or in pots placed in a shady situation.

Although it has the habit of *P. graveolens*, excepting the swollen joints, the flowers have the essential characters of our section *Monospatalla*, and it must therefore rank near *P. bicolor* in systematical arrangement.





PELARGONIUM nanum.

Pigmy Stork's-bill.

P. nanum, pedunculis subquadrifloris paniculatis, foliis cordatis trilobis inæqualiter obtuse dentatis, caule suffruticoso declinato, stipulis cordato-lanceolatis ciliatis.

Pelargonium ignescens γ *nanum*. Hoare MSS.

Stem very short, suffruticose; *branches* declining, thickly covered with unequal villous hairs. *Leaves* cordate, 3-lobed, unequally and very bluntly toothed, covered on both sides with short stiff hairs. *Petioles* slightly flattened and furrowed on the upper side and convex on the lower, thickly clothed with soft villous hairs, as are the peduncles, involucre, and calyx. *Stipules* cordately lanceolate, acute, ciliate. *Peduncles* panicked, 2 to 4-flowered. *Involucre* of one leaflet, divided into 4 or 6 segments; *segments* ovately lanceolate, ciliate. *Pedicles* curved upwards. *Calyx* 5-cleft, upper segment erect, ovate, keeled; the others broadly lanceolate, reflexed. *Nectariferous tube* about the length of the calyx, much flattened and furrowed on each side, and gibbous at the base. *Petals* 5, the two uppermost obovate, of a light scarlet, lightest at the base, from which branch numerous black lines that are reticulately branched; lower petals broadly ligulate, rather paler, with 2 purple lines from the base of each. *Filaments* 10, united at the base, 7 bearing anthers, which are all sterile in our specimens. *Style* flesh-coloured, hairy. *Stigmas* 5, purple, reflexed.

This very curious and handsome little plant is a hybrid production, and was raised by Sir R. C. Hoare

from the seed of a plant of *P. fulgidum* that had been impregnated by some other kind, and from a specimen sent us by him our drawing and description were taken. It is so very unlike any other with which we are acquainted, that we can form no guess concerning its other parent. It is always likely to remain a scarce plant, as it makes few shoots, and those generally covered with flowers. We find it thrive in an equal mixture of turfy loam, peat, and sand, watering it but sparingly in winter. Cuttings, when they can be procured, will strike root freely if planted in the same kind of soil, and set on a shelf in the greenhouse. The best time for planting them is in spring, that the young plants may be established before winter.

Stems very short, suberect, 2 or 3 leaved, thickly covered with unequal villous hairs. Leaves cordate, 3-lobed, unequally and very bluntly toothed, covered on both sides with short stiff hairs. Petioles slightly flattened and tapered on the upper side and convex on the lower, thickly clothed with soft villous hairs, as are the peduncles, involucre, and calyx. Sepals cordately lanceolate, acute, ciliolate. Petals 5, parted, 2 to 4-flowered. Anthers of one filament divided into 4 or 5 segments; segments ovate-lanceolate, ciliate. Ovary curved upwards. Style 5-cleft, uppermost cleft longest, acute, bearded; the others broadly lanceolate, 10-ribbed. Stigma 5-lobed, about the length of the style, much dilated and flattened on each side, and ribbed at the base. Style at the two uppermost lobes, 2 or 3 in length, flattened at the base, from which branch numerous short hairs that are intricately branched. Style a pale pinkish-lilac late, rather pale, with 2 purple lines from the base of each. Filaments 10, united at the base, 7 parted at the tips, which are all united in our specimens, 2 or 3 fresh-coloured, hairy. Ovary 5-angled, reflexed.

This very curious and handsome little plant is a hybrid production and was raised by Sir R. C. Hoare.

ALBERTIA





DIMACRIA astragalifolia.

Astragalus-leaved Dimacria.

D. astragalifolia, umbella composita multiradiata, foliis inferioribus simplicibus ovatis obliquis ternatisve: superioribus pinnatis pilosis; foliolis subsessilibus alternis ovatis obliquis integerrimis terminali maximo, petalis linearibus undulatis obtusis patentibus.

Pelargonium astragalifolium. *Jacq. ic. rar. 3. t. 511.*

Pers. syn. 2. p. 227. Comm. præl. 53. t. 3.

Geranium astragalifolium. *Andrews's reposit. 190.*
icone pessima.

Root tuberous. *Stem* none. *Leaves* in clusters at the crowns of the root: lower ones simple, roundly ovate, oblique, obtuse; others ternate or unequally pinnate, hairy on both sides: *leaflets* alternate, nearly sessile, roundly oval, obtuse, oblique at the base, entire, from 5 to 14 on each leaf; the terminal one much larger than the others. *Petioles* long and slender, flattened on the upper side and convex on the lower, thickly clothed with soft white hairs, as are the peduncles, bractes, and calyx. *Stipules* subulate, joined to the base of the petioles. *Scape* branching. *Peduncles* cylindrical, many-flowered. *Flowers* spreading in a radiate form. *Involucre* of numerous subulate fringed bractes. *Calyx* 5-cleft, segments concave, linearly lanceolate, fringed, upper ones largest, erect, the others spreading. *Nectariferous tube* sessile, slightly flattened, and furrowed on each side. *Petals* 5, linear, undulate, obtuse, 2 upper ones connivent at the base and spreading at the points, straw-coloured,

with a bright red spot in the centre, and below it are 3 or 4 small red lines; lower petals rather smaller and more spatulate, straw-coloured. *Filaments* 10, united at the base, 5 bearing anthers, the two lower ones much longer than the others. *Pollen* yellow. *Germen* villous. *Style* very short, hairy, and curved upwards. *Stigmas* 5, red, reflexed.

This handsome plant, which has often been confounded with *D. pinnata*, is as distinct from it as any of this group well can be; though that is a very variable plant, particularly in the colour of the flowers. Since we published the variety that is figured at No. 46, we have seen others that are much handsomer; one with a milk-white flower marked with red spots, another with a pale rose-coloured flower with a beautiful large crimson spot in the centre, and several other varieties. If the figure of Mr. Andrews's *Geranium pinnatum* (*Bot. Rep.* 311) is correct, it certainly is a very different species from either of the above, and may be named *Dimacria foliolosa*. It is represented with from 30 to 40 leaflets on one leaf, and much narrower petals than *D. pinnata*.

Our drawing was taken from a plant at the nursery of Messrs. Colvill, where it was covered with flowers all the summer and ripened plenty of seeds. Like the others of the tuberous-rooted species, it thrives best in an equal mixture of turfy loam, peat, and sand, with plenty of small potsherds at the bottom of the pot. After it has done blowing and has ripened seed, it should be kept quite dry, till it shows an inclination to grow again; it should then be planted in fresh mould, and a little water given it when quite dry, and as it grows it may be shifted into a larger pot. It may be increased by the little tubers from the old root; but the better way is by seeds, which ripen plentifully.



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D. Smith. del.

Pub. by J. Ridgway 170 Piccadilly Feb. 1. 1822.

J. Watts. sc.

PELARGONIUM Lamberti.

Lambert's Stork's-bill.

P. Lamberti, pedunculis paucifloris, foliis cuneatis trifidis; segmentis acutis lobatis inciso-serratis, caule ramosissimo, calycibus reflexis, tubo nectarifero calyce longiori.

Pelargonium Lambertia. *Hoare Geran.* p. 24. n. 335.

Stem shrubby, much branched, and clothed with a brown cracked bark; *branches* numerous, slender, upright, or slightly spreading, clothed with unequal spreading hairs, as are the petioles, peduncles, and calyx. *Leaves* wedge-shaped, trifid, clothed on both sides with a close short pubescence, and a few hairs scattered round the edges; upper segment widest, generally 3-lobed, sharply and deeply serrated; side ones lanceolate, acute; on the lower part of the plant lobed, deeply and sharply serrate, on the upper part entire; sometimes the upper leaves are quite entire and lanceolate. *Petioles* very short, flattened and furrowed on the upper side and convex on the lower. *Stipules* cordate at the base and terminating in a long taper point, fringed. *Peduncles* numerous, reaching far beyond the leaves, 2 to 4-flowered. *Involucre* of 4 or 5 bractes; *bractes* ovate, acute, with reflexed, fringed margins. *Pedicles* unequal in length, longer than the bractes. *Calyx* 5-cleft, segments lanceolate, reflected. *Nectariferous tube* flattened and furrowed on each side, slightly recurved, longer than the calyx, thickly clothed with unequal spreading hairs. *Petals* 5, the two uppermost widely obovate, of a light rose-colour, with a dark velvet spot in the centre, which

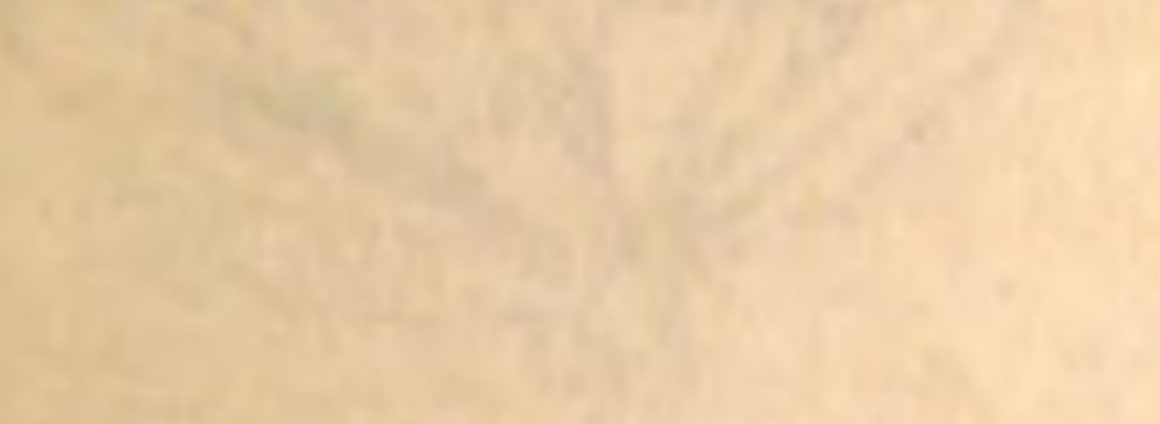
joins 2 lines from the base that are slightly branched; lower ones broadly ligulate or spathulate, of a lighter colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* red, very hairy. *Stigmas* 5, purple, revolute.

This handsome plant is also of hybrid origin, and was raised from seed by Sir R. C. Hoare, who has named it in compliment to his friend A. B. Lambert, Esq. and from a fine plant communicated to us from Sir Richard's superb collection, our drawing and description were taken. It seems to be allied to *P. acerifolium*, *scabrum*, or some of that group; but it is impossible to trace its origin with certainty. It makes a pretty compact bush, and flowers abundantly for the greater part of the year; it also differs considerably from most others in habit, which makes it desirable. The best soil for it is a mixture of rather more than half light turfy loam, and peat or decayed leaves. Cuttings root freely planted in pots in the same kind of soil if placed in a sheltered situation.



David's Princess Angora Cordonia

Shrubby, much branched; branches thickly
clothed with small, white, woolly hairs. Petioles
pubescent. Leaves large, ovate, rounded at the base,
apex acuminate, entire, glabrous, with a few hairs
on the underside. Inflorescence terminal, branched,
with many small flowers. Fruit globose, slightly
inflated, with a few hairs at the base. The
leaves are very large, and the flowers are very
small. The fruit is very large and is covered
with a thick coat of woolly hairs. The plant
is very common in the mountains of the
Andes. It is used for medicinal purposes.
The leaves are used to treat rheumatism and
the fruit is used to treat the stomach and
intestines. The plant is also used for the
treatment of the skin and for the treatment
of the eyes.





PELARGONIUM *difforme*.

Various-leaved Stork's-bill.

P. difforme, umbellis plurifloris, foliis difformibus cordato-cuneatis sublobatis cartilagineo-dentatis erosive, stipulis cordato-lanceolatis acuminatis dentatis ciliatis, petalis obovatis, tubo nectarifero calyce breviori.

Davey's Princess Augusta Geranium. *Hortulanorum*.

Stem shrubby, much branched; *branches* thickly clothed with unequal villous hairs, as are the petioles, peduncles, and calyx. *Leaves* of various forms, rigid, generally deformed, slightly pubescent on each side, cordate or cuneate at the base; some slightly lobed, sharply but unequally toothed with brown cartilaginous teeth; others are lanceolate, but dilated at the base, with irregular elongated points generally with a blunt termination; some are deeply, others slightly toothed, or nearly entire. *Petioles* unequal in length, flattened and furrowed on the upper side and convex on the lower, a little dilated at the base and apex. *Stipules* cordate or cordately lanceolate, taper-pointed, generally toothed and ciliate. *Peduncles* much longer than the leaves, several-flowered. *Involucre* of 6 or 7 ovate acute bractes. *Calyx* 5-cleft, segments very long, lanceolate, acute, longer than the nectariferous tube. *Petals* 5, widely obovate, of a blush colour, the two uppermost largest, with a large dark purple spot in the centre, and several purple lines from the base, that are slightly branched. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Style* red, hairy at the base. *Stigmas* 5, purple, revolute.

This handsome flowering plant is of hybrid origin, and was raised from seed by Mr. Davey, at whose nursery our drawing was taken last summer: the most singular circumstance attending it is in its foliage, as scarcely two of its leaves are at all alike, and the greater part of them have a kind of monstrosity about them, particularly near their margins. It seems nearly related to *P. superbum*, but is quite distinct in its habit from any with which we are acquainted: its flowers rank amongst the most beautiful of its tribe. It flourishes well in a mixture of turfy loam and peat, and requires but little water in winter: it appears to be as hardy as any of the genus and as easily managed. Cuttings root readily, if planted in pots in the same kind of soil, and placed in a shady part of the greenhouse.





HOAREA ovalifolia.

Oval-leaved Hoarea.

H. ovalifolia, umbellis simplicibus compositisve, foliis ovalibus obtusis planis aut margine involutis integerrimis hirsutis, petalis linearibus undulatis tortis.

Root tuberous. *Stem* none. *Leaves* growing in a radiate form, widely oval, obtuse, entire, thickly covered and fringed with long white hairs, strongly nerved underneath; some quite flat, others involute. *Petioles* longer than the leaf, thickly clothed with white unequal hairs. *Stipules* membranaceous, attached to the base of the petioles, and terminating in a subulate point. *Scapes* cylindrical, very hairy, either simple or sometimes divided, with leafy bractes at the base of the peduncles. *Umbels* many-flowered. *Peduncles* cylindrical, thickly clothed with white unequal hairs, as are the calyx and nectariferous tube. *Involucre* of several subulately linear fringed bractes. *Calyx* 5-cleft, upper segment lanceolate, concave, erect, the others linear and reflected, with membranaceous margins. *Nectariferous tube* sessile, slightly flattened on each side. *Petals* 5, linear, much waved, generally twisted, white, 2 upper ones rather widest with a pale pink line near the base of each. *Filaments* 10, united into a tube, 5 of nearly the same length, and all bearing anthers; barren filaments curved inwards like the others of this section. *Germen* and *aristæ* hairy. *Style* hairy, purple. *Stigmas* 5, very slender, red and reflexed.

This plant has a near affinity with *Geranium undulatum* of Andrews's Botanist's Repository, n. 292; but that is figured and described with lanceolate leaves, and if the dissections at the bottom of his figure be

correct, it is essentially different, and belongs to our genus *Dimacria*, as in our plant the 5 fertile stamens are nearly of the same length, and the sterile ones are curved inwards like a hook; in his dissection they are all represented erect, and two of the fertile ones much longer than the others.

Our drawing was taken at the Nursery of Messrs. Colvill, from a fine healthy plant that had been lately imported from the Cape; it had the appearance of being dioecious, as the germens and stigmas were all imperfect, consequently it produced no seed; but it propagates freely from the little tubers of the roots, which should be planted in pots in an equal mixture of turfy loam, peat, and sand; the tops of the roots must be left a little above the surface, and require no water till the wound is dried up; they may then be regularly watered, and will soon make young plants: these should then be transplanted into small pots in the same kind of soil, and require the treatment of the other tuberous-rooted species.

PILLARIONTHUM

Gay Herb. Ind.





PELARGONIUM pulchrum.

Gay Stork's-bill.

P. pulchrum, umbellis multifloris paniculatis, foliis reniformibus cartilagineo-dentatis mollibus multinerviis, stipulis latis cordatis acuminatis, tubo nectarifero calyce multo breviori.

Stem shrubby, branching; *branches* thickly covered with short villous hairs, as is every other part of the plant except the corolla. *Leaves* kidney-shaped, slightly lobed, and toothed with numerous short brown cartilaginous teeth which gradually diminish towards the base; very soft to the touch; nerves numerous, prominent, much branched. *Petioles* a little longer than the leaf, widely flattened and channeled on the upper side, and convex on the lower. *Stipules* broadly cordate, ciliate, and ending in an acute point. *Peduncles* paniced, corymbiform; *umbels* many-flowered. *Involucre* of several concave, lanceolate, acute bractes, joined at the base. *Calyx* 5-cleft, segments lanceolate, acute, spreading or slightly recurved. *Nectariferous tube* much shorter than the calyx, flattened on both sides, and ridged at the back. *Petals* 5, the two uppermost obovate, oblique, of a pale rose colour, with a dark purple spot in the centre, and numerous lines of the same colour which branch in all directions; lower ones oblong, obtuse, of a pale blush or nearly white, and marked from the base to the middle with 4 faint red lines. *Filaments* 10, united at the base, 7 only bearing anthers, and these were all imperfect in our specimens. *Germen* villous. *Style* red, hairy on the lower part and smooth on the upper. *Stigmas* 5, of the same colour, revolute.

Our drawing and description of this pretty plant were taken from a fine specimen sent to us by Sir R. C. Hoare, who raised it from seed. It is a hybrid production, and is nearly related to *P. floridum* and *P. striatum*. All the flowers on our specimens had imperfect anthers, consequently the flowers were not so large as if the anthers had been perfect. We suspect it will bear fertile anthers next season, particularly if it be grown in stronger soil; we may then expect to see its flowers much larger, and the lower petals to lose their red stripes, in the same manner as its near relative *P. striatum*. The soil that we would recommend for it is a mixture of light turfy loam and peat. Cuttings root freely, planted in pots in the same kind of soil, if placed in a sheltered situation.

Stems shrubby, branching; leaves thickly covered with short villous hairs, as is every other part of the plant except the corolla. Leaves kidney-shaped, slightly lobed, and toothed with numerous short brown cartilaginous teeth which gradually diminish towards the base; very soft to the touch; nerves numerous, prominent, much branched. Petals a little longer than the leaf, widely flattened and channelled on the upper side, and convex on the lower. Stamens broadly cordate, ciliate, and ending in an acute point. Petals panicled, corymbiform; made many-flowered involucre of several connate, lanceolate, acute bracts joined at the base. Calyx 5-lobed, segments lanceolate, acute, spreading or slightly recurved. Nectariferous tube much shorter than the calyx, flattened on both sides, and rigid at the base. Petals 5, the two uppermost obovate, cleft, of a pale rose colour, with a dark purple spot in the centre, and numerous lines of the same colour which branch in all directions; lower ones oblong, obtuse, of a pale blush or nearly white, and marked from the base to the middle with 4 faint red lines. Stamens 10, united at the base, 7 only bearing anthers, and these were all imperfect in our specimens. Gynoecium villous. Style red, hairy on the lower part and smooth on the upper. Stigma 3; of the same colour, trifid.

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C. D. Smith, del. Pub by J. Ridgway 170 Piccadilly March. 1. 1822.

J. Watts sc.

PELARGONIUM *concinnum*.

Comely Stork's-bill.

P. concinnum, umbellis subquadrifloris, foliis oblatis trifidis undulatis obtuse denticulatis glabriusculis basi truncatis; segmentis lateralibus bilobis; intermedio trilobo, stipulis dentatis, calycibus reflexis, tubo nectarifero longitudine calycis.

Pelargonium purpureum, superbum. Hoare *Geraniaceæ*, p. 14.

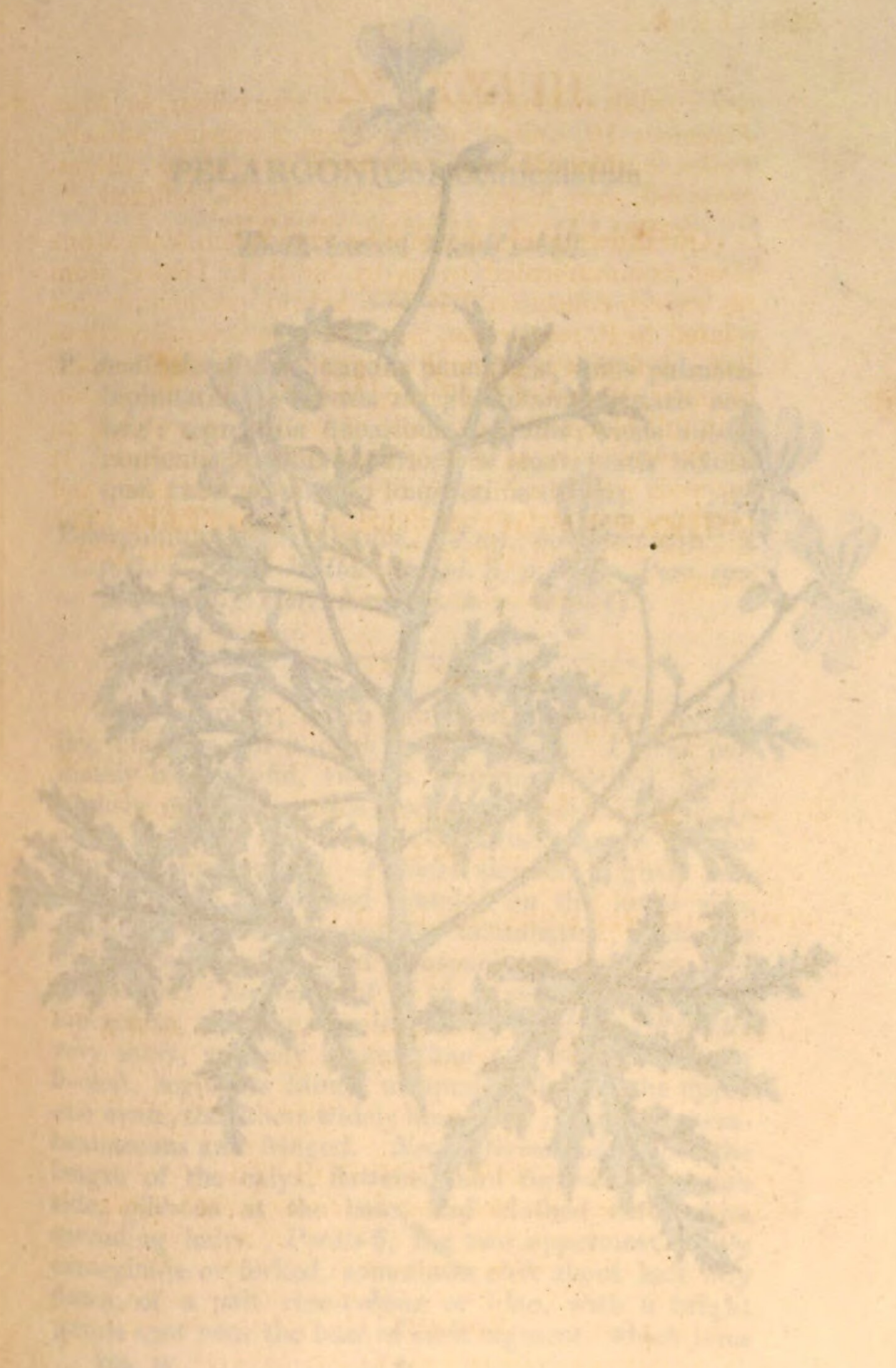
Stem shrubby, branching; *branches* slender, thickly clothed with soft villous unequal spreading hairs. *Leaves* truncate at the base, trifid, wider than long, undulate, shallowly toothed with very blunt unequal teeth, smoothish or slightly hairy; segments wedge-shaped, hollow, curved inwards, side ones 2-lobed, middle one 3-lobed. *Petioles* slender, slightly flattened on the upper and rounded on the lower side, curved upwards at the point, thickly covered with soft villous hairs, as are the peduncles, calyx, and nectariferous tube. *Stipules* cordate, or widely ovate, acute, toothed and ciliate. *Peduncles* slender, reaching far beyond the leaves, generally 4-flowered. *Involucre* of 5 or 6 lanceolate acute bractes. *Pedicles* a little longer than the bractes, bent upwards. *Calyx* 5-cleft, of a dark brown colour, upper segment widest, erect, the others lanceolate, acute, reflexed or revolute. *Nectariferous tube* about the length of the calyx, flattened on each side and swollen at the base, of a dark brown colour. *Petals* 5, the 2 upper ones roundly obovate, of a bright rose colour, with a dark spot in the centre which joins some slightly branched purple lines from the base, and underneath the spot is a white mark;

lower petals oblong, obtuse, light rose colour, or lilac. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* and *aristæ* villous. *Style* red, very hairy. *Stigmas* 5, purple, reflexed.

Our drawing and description were taken from a fine plant communicated to us by Sir R. C. Hoare, from his superb collection. It is a hybrid production and related to *P. purpureum*, but differs in several particulars; and as it is of smallish growth and an abundant bloomer, it makes a pleasing variety. We have seen it in full bloom in the middle of winter, at which time its flowers were as fine or finer than in summer. It succeeds well in a mixture of turfy loam and peat; and cuttings soon strike root if planted in pots in the same kind of soil, and placed in a shady part of the greenhouse.

Stems shrubby, branching; branches slender, thickly clothed with soft villous unequal spreading hairs. Leaves truncate at the base, rigid, wider than long, undulate, shallowly toothed with very blunt unequal teeth, smoothish or slightly hairy; segments wedge-shaped, hollow, curved inwards, side ones 2-lobed, middle one 3-lobed. Petioles slender, slightly flattened on the upper and rounded on the lower side, curved upwards at the point, thickly covered with soft villous hairs, as are the peduncles, calyx and nectary-tube. Sepals cordate, or widely ovate, acute, toothed and ciliate. Petals slender, reaching far beyond the leaves, generally 4-flowered. Anthers of 2 or 3 lanceolate acute bristles. Petals a little longer than the bristles, bent upwards. Calyx 5-lobed, of a dark brown colour, upper segment widest, erect, the others lanceolate, acute, reflexed or revolute. Nectary-tube about the length of the calyx, flattened on each side and swollen at the base of a dark brown colour. Petals 5, the 2 upper ones roundly obovate of a bright rose colour, with a dark spot in the centre which joins some slightly marked purple lines from the base, and underneath the spot a white point.

PELARGONIUM





E. D. Smith: del.

Pub by J. Ridgway 170 Piccadilly Apr. 1. 1822.

J. Watts. sc.

PELARGONIUM denticulatum.

Tooth-leaved Stork's-bill.

P. denticulatum, pedunculis paucifloris, foliis palmato-bipinnatifidis viscosis margine planis dentatis scabris; segmentis linearibus repandis; venis subtus muricatis, petalis superioribus emarginatis bifidisque, tubo nectarifero longitudine calycis.

Pelargonium denticulatum. Jacq. hort. schœnbr. 2. p. 5. t. 135. Willden. sp. pl. 3. p. 680. Pers. syn. 2. p. 232. Hort. Kew. ed. 2. v. 4. p. 179.

Stem shrubby, much branched; *branches* spreading, clammy, of a dark green colour. *Leaves* palmately bipinnatifid, viscous, margins toothed, flat or slightly curved inwards; segments lanceolate or linear, bluntish, generally toothed, nerves and petioles muricate underneath. *Petioles* slender, slightly flattened on the upper and rounded on the lower side. *Stipules* cordately lanceolate, acuminate. *Peduncles* cylindrical, swollen, and transparent at the base, 2 or 3 flowered. *Involucre* of 4 to 6 very short, widely lanceolate, concave, keeled, acute bractes. *Pedicles* very short, scarcely longer than the bractes. *Calyx* 5-cleft, segments blunt, unequal, reflexed, the upper one ovate, the others widely lanceolate; margins membranaceous and fringed. *Nectariferous tube* about the length of the calyx, flattened and furrowed on each side, gibbous at the base, and clothed with white spreading hairs. *Petals* 5, the two uppermost deeply emarginate or forked, sometimes cleft about half way down, of a pale rose-colour or lilac, with a bright purple spot near the base of each segment, which joins

some slightly branched purple lines from the base; lower petals oblong, obtuse, pale lilac. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* of a pale colour, slightly hairy on the lower part and smooth on the upper. *Stigmas* 5, pale purple, reflexed.

Our drawing of this curious plant, which is considered a genuine species, was taken, last summer, from a plant in the collection of R. H. Jenkinson, Esq. It has been cultivated in our gardens, according to the Hortus Kewensis, ever since the year 1789, when it was introduced from the Cape of Good Hope by Mr. Francis Masson. It makes a pleasing variety amongst the other plants of the genus on account of its finely divided leaves, which are covered with a shining glutinous matter, like other nearly related species. Its flowers are also very singular, as the upper petals of most of them are deeply cleft, so that they might be termed forked-petaled. It is a hardy free-growing kind, and thrives well in a mixture of loam and peat, or any light vegetable mould. Cuttings strike root freely, planted in pots and placed in a sheltered situation.



E. D. Smith. del.

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J. Watts. sc.

PELARGONIUM Smithii.

Smith's Stork's-bill.

P. Smithii, umbellis plurifloris, foliis cordatis quinquelobis undulatis inæqualiter profundeque dentatis concavis rigidis, stipulis cordatis subdentatis, tubo nectarifero calyce parum longiori.

Stem shrubby, branching; *branches* spreading, thickly clothed with unequal soft villous spreading hairs, as are the petioles, peduncles, and calyx. *Leaves* cordate, concave, 5-lobed, undulate, unequally and deeply toothed with sharp rigid teeth, covered on both sides with short pubescent hairs. *Petioles* widely flattened and furrowed on the upper side and convex on the lower, dilated at the base and apex. *Stipules* widely cordate, generally toothed, very hairy, and ciliate. *Peduncles* short and stiff, swollen at the apex, from 4 to 7 flowered. *Involucre* of 6 widely lanceolate concave taper-pointed hairy bractes, about the length of the pedicles. *Calyx* 5-cleft, upper segment largest, ovate, acute, erect, the others lanceolate, spreading or reflexed. *Nectariferous tube* about the length or a little longer than the calyx, flattened and furrowed on each side, a little gibbous at the base. *Petals* 5, the two uppermost oblique, obovate, of a pale scarlet inclining to orange, with a bright purple spot in the centre, and a white mark below it, and numerous purple stripes from the base that are slightly branched; lower petals oblong, obtuse, of rather a lighter colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* red, slightly hairy on the lower part and smooth on the upper. *Stigmas* 5, purple and revolute.

This fine plant is a hybrid production, and was raised from seed by Mr. Smith, gardener to the Earl of Liverpool, at Coombe Wood, at the same time as *P. rubescens*. He informs us that it was raised from the seed of *P. ignescens* that had been impregnated with one of the strong-growing kinds, perhaps *P. floridum*. It is a very free growing sort and an abundant bloomer, and is a valuable acquisition to our collections from the size and brilliancy of its flowers. It thrives well in a mixture of turfy loam and peat, and a little sand in it to keep it open. Cuttings strike root readily planted in pots in the same kind of soil, and placed on a shelf in the greenhouse.

It is but too frequently the practice among nurserymen, when they are not certain of the plant ordered by a customer, to put another in its place sooner than not fill up the order they receive. We are told that at this time the present plant is often sent instead of *P. pavoninum* by several nurserymen about London. In this way the figures in botanical works often bear the blame due to the infidelity of the nurseryman.

the lower, dilated at the base and apex. Stipules widely cordate, generally toothed, very hairy, and ciliate. Petioles short and stout, swollen at the apex, from 4 to 7 flowered. Bractlets of 6 widely lanceolate, concave taper-pointed hairy bractlets, about the length of the pedicels. Calyx 5-lobed, upper segment largest, ovate, acute, erect, the others lanceolate, spreading or reflexed. Petals 5, a little longer than the calyx, flattened and narrowed on each side, a little gibbous at the base. Petals 5, the two uppermost oblique, obovate, of a pale scarlet inclining to orange, with a bright purple spot in the centre, and a white mark below it, and numerous purple stripes from the base that are slightly branched; lower petals oblong, obtuse, of a lighter colour. Filaments 10, united at the base, 7 bearing anthers. Pollen orange coloured. Gynaeceum villous. Style red, slightly hairy on the lower part and smooth on the upper. Stigmas 5, purple and revolute.



C. D. Smith. del.

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S. Watts. sc.

ERODIUM crassifolium.

Hoary-leaved Heron's-bill.

E. crassifolium, pedunculis 2-4-florisve, foliis pinnatifido-laciniatis canescentibus; segmentis lineari-lanceolatis inciso-dentatis, stipulis membranaceis, petalis æqualibus rotundatis imbricatis calyce duplo longioribus.

Erodium crassifolium. *Hort. Kew. ed. 2. vol. 4. p. 155.*

Pers. syn. 2. p. 223. Desf. atl. 2. p. 111.

Geranium crassifolium. *Andrews's reposit. 136.*

Stem suffruticose, branching; *flowering branches* erect, slender, of a reddish brown colour, thickly clothed with unequal villous hairs. *Leaves* pinnatifid or deeply laciniated, hoary on both sides, occasioned by a white close-pressed pubescence, and numerous spreading hairs intermixed: *segments* linearly lanceolate, falcate, channelled, deeply and sharply toothed. *Petioles* long and slender, nearly cylindrical, thickly clothed with white spreading hairs. *Stipules* joined to the base of the petioles, membranaceous, some acute, others obtuse, undulate, fringed, white or sometimes tinged with red at the base. *Peduncles* smooth or very slightly hairy, cylindrical, 2 to 4-flowered. *Involucre* of from 2 to 4 membranaceous, obtuse, concave, undulate, fringed bractes. *Pedicles* very slender, smooth and shining or slightly hairy. *Sepals* 5, lanceolate, concave, mucronate, many-nerved, hairy, with membranaceous margins. *Petals* 5, equal, nearly round, imbricate, about twice the length of the calyx, of a light rose colour, with a black spot at the base of each, which branches a little upwards. *Filaments* 10,

5 bearing anthers, the 5 fertile ones longest, with subulate points, and surrounding the stigmas, 5 sterile ones about half the length, and flat. *Stigmas* 5, nearly sessile, spreading. *Capsules* pubescent. *Aristæ* above 3 inches long, spirally twisted, and feathered inside, the outside pubescent.

This handsome and now very rare plant was sent to us by Sir R. C. Hoare, from his rich collection of Geraniaceæ. Before we received it from him we were afraid that it had entirely disappeared from this country, as we have not heard of any person possessing it for some years past. It is a native of the island of Cyprus, and also of Barbary, where several more very handsome and interesting species are to be met with that have not yet appeared in our collections. The present subject is a very desirable plant, and produces its elegant flowers in succession all the summer. It thrives well with us in an equal portion of turfy loam, peat, and sand; but particular care is requisite that it may not get too much wet, and an airy part of the greenhouse suits it best. Cuttings of it strike root readily in the same kind of soil; but as these are sparingly produced, the best method is to increase it by seeds, which ripen in abundance.



C. D. Smith. del.

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J. Watts. sc.

PELARGONIUM *rigescens*.

Stiff-leaved Stork's-bill.

P. rigescens, umbellis plurifloris, foliis rotundato-cordatis concavis subangulatis simpliciter denticulatis glabriusculis rigidis; junioribus zonatis, petalis inferis ligulatis, tubo nectarifero longitudine calycis.

Pelargonium hepaticifolium, var. *Hoare Geraniaceæ*, p. 11. *nec aliorum*.

Stem shrubby, branching; *branches* slightly spreading, rigid, thickly clothed with unequal spreading hairs, as are the petioles, peduncles, and pedicles. *Leaves* roundly cordate, concave, slightly angular, simply toothed with short rigid unequal teeth, smoothish or slightly downy, rigid; *young leaves* zonate or marked with a brown circle, which disappears in the full-grown ones. *Petioles* flattened and furrowed on the upper side and convex on the lower, dilated at the base. *Stipules* cordately lanceolate, acute, entire with ciliated margins. *Peduncles* bent upwards, several-flowered. *Involucre* of 6 lanceolate taper-pointed fringed bractes. *Pedicles* unequal in length, shorter than the nectariferous tube. *Calyx* 5-cleft, villous; segments unequal, erect, lanceolate, acute. *Nectariferous tube* about the length of the calyx, flattened on each side, gibbous at the base. *Petals* 5, the two uppermost obliquely obovate, of a pale rose-colour, with 3 or 4 purple lines from the base which are slightly branched, 3 lower ones ligulate, of a lighter colour. *Filaments* 10, united at the base, 7 bearing anthers. *Germen* villous. *Style* red, slightly hairy at the base and smooth on the upper part. *Stigmas* 5, red and revolute.

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This very curious plant is of hybrid origin, and appears to be intermediate between *P. cordatum* and one of the horse-shoe tribe. Its flowers bear a strong resemblance to the former, but its leaves, except in rigidity, to that of the latter, even to the circle on its leaves. *P. hepaticifolium* of Sprengel is also slightly marked with a circle, but the number and form of the flowers, and particularly the habit of the plant, are totally dissimilar.

The plant from which our drawing was taken was kindly communicated to us by Sir R. C. Hoare, who raised it from seed. We find it thrives exceedingly well in a mixture of light turfy loam and peat, and it seems to be as hardy as any of the genus. Cuttings soon strike root planted in pots in the same kind of soil, if placed in a sheltered situation.



E. D. Smith. del.

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J. Watts. sc.

PELARGONIUM *hirtum*.

Hairy Stork's-bill.

P. hirtum, umbellis 3-5-florisve, foliis bipinnato-supra-decompositis hirtis: foliolis linearibus obtusis, caule carnosso squamoso subdecumbente, petalis superioribus emarginatis, tubo nectarifero calyce duplo breviori.

Pelargonium hirtum. Willden. *sp. pl.* 3. p. 689. Jacq. *ic. rar.* 3. t. 536. Collect. 2. p. 144. Pers. *syn.* 2. p. 234.

Geranium hirtum. Cavan. *diss.* 4. p. 258. t. 117. f. 2.

Geranium abrotanifolium. Andrews's *geran. c. ic.* ?
nec aliorum.

Stem shrubby, succulent, rather decumbent, irregularly swollen, in some places quite slender, scaly, owing to the cracking of the brown hairy bark, and where the footstalks of the leaves are dropped off there are tufts of white villous hairs; *flowering branches* slenderer, and divided, bearing numerous umbels of flowers, thickly clothed with unequal woolly hairs, as is every other part of the plant except the corolla. *Leaves* decompound, divided into innumerable linear bluntish leaflets, points recurved or revolute. *Petioles* slender, flattened and furrowed on the upper side and convex on the lower, much dilated at the base. *Stipules* lanceolately subulate, entire, joined to the base of the petioles. *Peduncles* much longer than the leaves, cylindrical, rigid, 3 to 5 flowered. *Involucre* of numerous unequal lanceolate or linear taper-pointed fringed bractes. *Pedicles* stiff, unequal in length, longer than the nectariferous tube. *Calyx* 5-cleft, segments blunt,

unequal, reflexed, the upper one widely lanceolate, the others narrowly lanceolate or linear. *Nectariferous tube* scarcely half the length of the calyx, flattened on each side. *Petals* 5, the two uppermost roundly ovate, emarginate, of a bright rose-colour, with a darker mark at the base, lower ones spatulate or narrowly obovate, concave, of a lighter colour. *Filaments* 10, united at the base, the front ones but scarcely so, 7 bearing anthers. *Pollen* straw-coloured. *Germen* and *aristæ* villous. *Style* short, red, hairy at the base and smooth on the upper part. *Stigmas* 5, purple, reflexed.

Our drawing of this curious species was taken at the Nursery of Messrs. Colvill last summer. It is very nearly allied to *P. tenuifolium* of L'Héritier; if it be really distinct. The chief differences mentioned by authors are, that the stem of this is shorter and decumbent, and clothed with persistent stipules; in *P. tenuifolium* it is longer, erect, and naked, its leaflets are also longer and pointed. *Geranium abrotanifolium* of Andrews is intended for one of these, but it is sometimes not easy to know what is meant by his figures, and his descriptions never help us. *P. abrotanifolium* of Jacquin is a very different plant, allied to *P. incisum*.

As this plant is of a very succulent nature, particular care must be taken not to overwater it in winter; it also requires to be kept on a dry airy shelf, as its leaves are apt to get mouldy if kept in too close a situation. The best soil for it is a mixture of turfy loam, peat, and sand, the same as recommended for the other succulent species. Cuttings will strike root freely in the same kind of soil, but they require to be dried a little before planting.



Stems slender, erect, branched, or
 a little decumbent, very hairy, and
 about 1/2 to 1 foot high. Leaves
 ovate, 1 to 2 inches long, 1/2 to 1
 inch wide, very hairy, and
 pointed at the tip. Flowers
 large, white, and very fragrant.
 The fruit is a small, round,
 green berry, which is eaten
 when ripe. The plant is
 common in the mountains
 of the West, and is used
 for medicinal purposes.



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CAMPYLIA cana.

Hoary-leaved Campylia.

C. cana, pedunculis 3-5-florisve, foliis ovato subrotundis obtusis crenatis dentatis plicatis holosericeis, stipulis bifidis, petalis pilosis; superioribus latis ovatis undulatis, caule fruticoso suberecto.

Campylia cana. *Colv. catal. p. 21. col. 1.*

Pelargonium canum. *Pers. syn. 2. p. 229.*

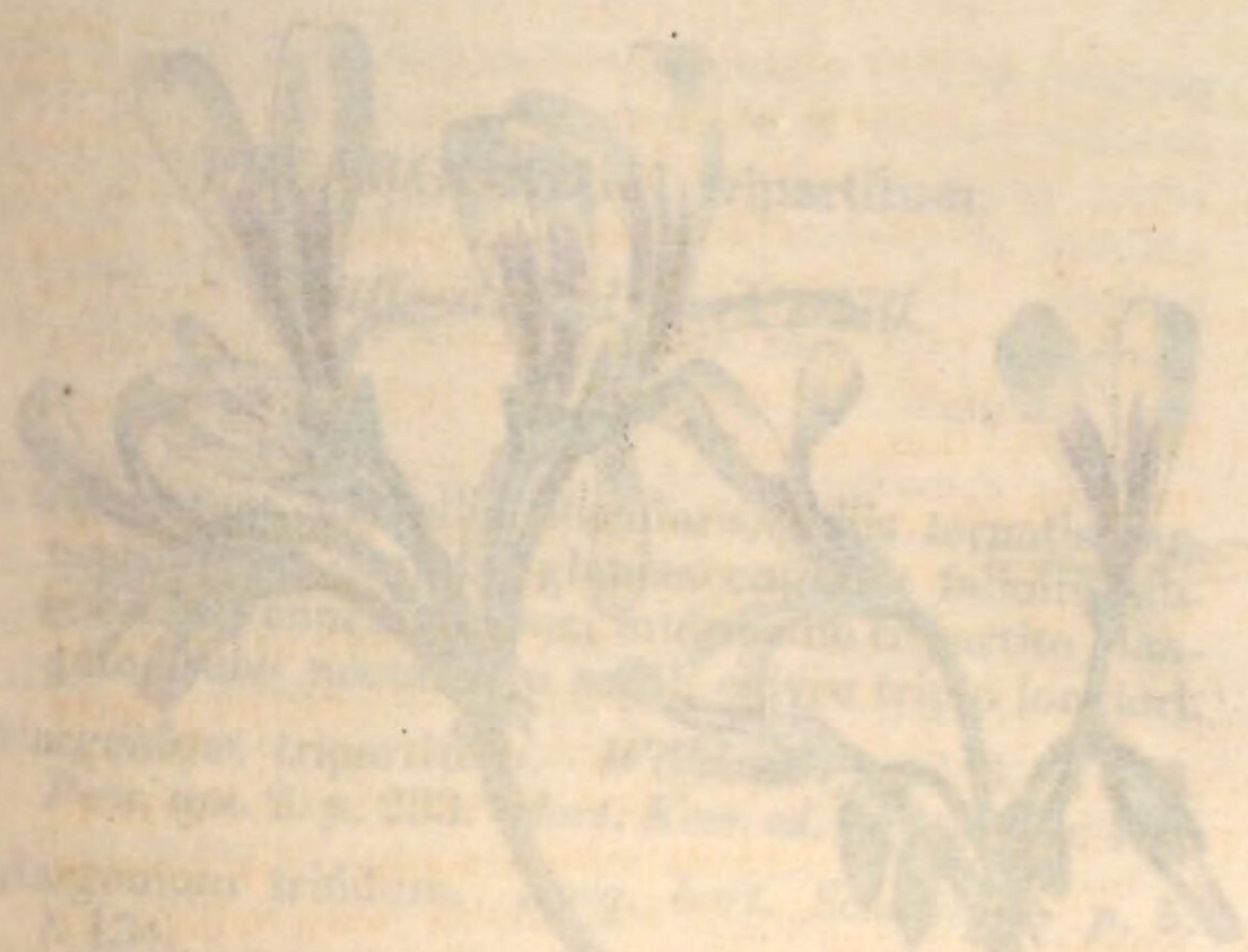
Geranium tomentosum. *Andrews's bot. rep. t. 115. nec aliorum.*

Stem shrubby, erect, branching; *branches* erect, or a little flexuose, very rugged, occasioned by the persistent bases of the petioles and stipules, densely tomentose. *Leaves* roundly ovate, obtuse, plicate, covered on both sides with a soft dense tomentum, which gives them a velvety appearance, closely toothed with rounded unequal, generally double teeth. *Petioles* often twisted, flattened on the upper side and rounded on the lower, thickly covered with long soft villous hairs. *Stipules* clasping the stem, generally bifid, points acuminate, fringed, bases persistent. *Flower-stalks* slightly branched, often dichotomous. *Umbels* 3 or 4 flowered. *Involucre* generally of 6 bractes, some ovate, others lanceolate, concave, and ciliate. *Pedicles* nodding before the flowers expand, erect when in bloom, and ascending when in fruit. *Calyx* 5-cleft, upper segment widest, erect, strongly nerved, concave, the others narrower, spreading, with membranaceous margins, all thickly covered with soft white hairs. *Nectariferous tube* about half the length of the calyx. *Petals* 5, hairy on the outsides, the 2 uppermost widely

ovate, undulate, strongly veined at the back, of a pale lilac, with a short red line at the base of each, forked downwards, unguis with an auricle on the inferior margin, lower petals ligulate or narrowly spatulate, of the same colour. *Filaments* 10, pubescent, 5 only bearing anthers, 2 upper sterile ones longer than the others and recurved. *Capsules* hispid. *Aristæ* spiral, villous, and bearded inwards. *Style* red, hairy. *Stigmas* 5, dark red, recurved.

This handsome species is nearer related to *Pelargonium eriostemon* of Jacquin than to any other, but in that the petals are white and notched at the end. *C. verbasciflora* seems to be intermediate of the present plant and *C. blattaria*; perhaps it is a mule. We received a fine specimen of it last summer from Sir R. C. Hoare, which we intend to publish soon. The present is the largest flowered of the genus with which we are acquainted. It makes a handsome plant, and grows freely if planted in an equal mixture of turfy loam, peat, and sand. The pots must be well drained with potsherds, that the wet may pass off readily. Cuttings soon strike root if planted in pots in the same kind of soil, and placed on a shelf in the greenhouse.

Our drawing was taken at the Nursery of Messrs. Colvill last summer, where it began to flower the beginning of March, and continued in fine bloom till late in the autumn.



Pharbitis nil (L.) Choisy.
 Pers. ex. Bot. 222. Mart. Bot. 222.
Pharbitis nil (L.) Choisy.
 Pers. ex. Bot. 222. Mart. Bot. 222.
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Pharbitis nil (L.) Choisy.
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PELARGONIUM tripartitum.

Brittle-stalked Stork's-bill.

P. tripartitum, umbellis plurifloris, foliis ternatis car-
nosis inciso-dentatis glaucescentibus: foliolis sub-
sessilibus cuneiformibus; intermedio tripartito elon-
gato, tubo nectarifero sessili calyce triplo longiori.

Pelargonium tripartitum. Willden. *sp. pl.* 3. p. 683.

Pers. syn. 2. p. 233. *Hort. Kew. ed.* 2. vol. 4. p. 180.

Pelargonium trifidum. Jacq. *hort. Schænb.* 2. p. 5.
t. 134.

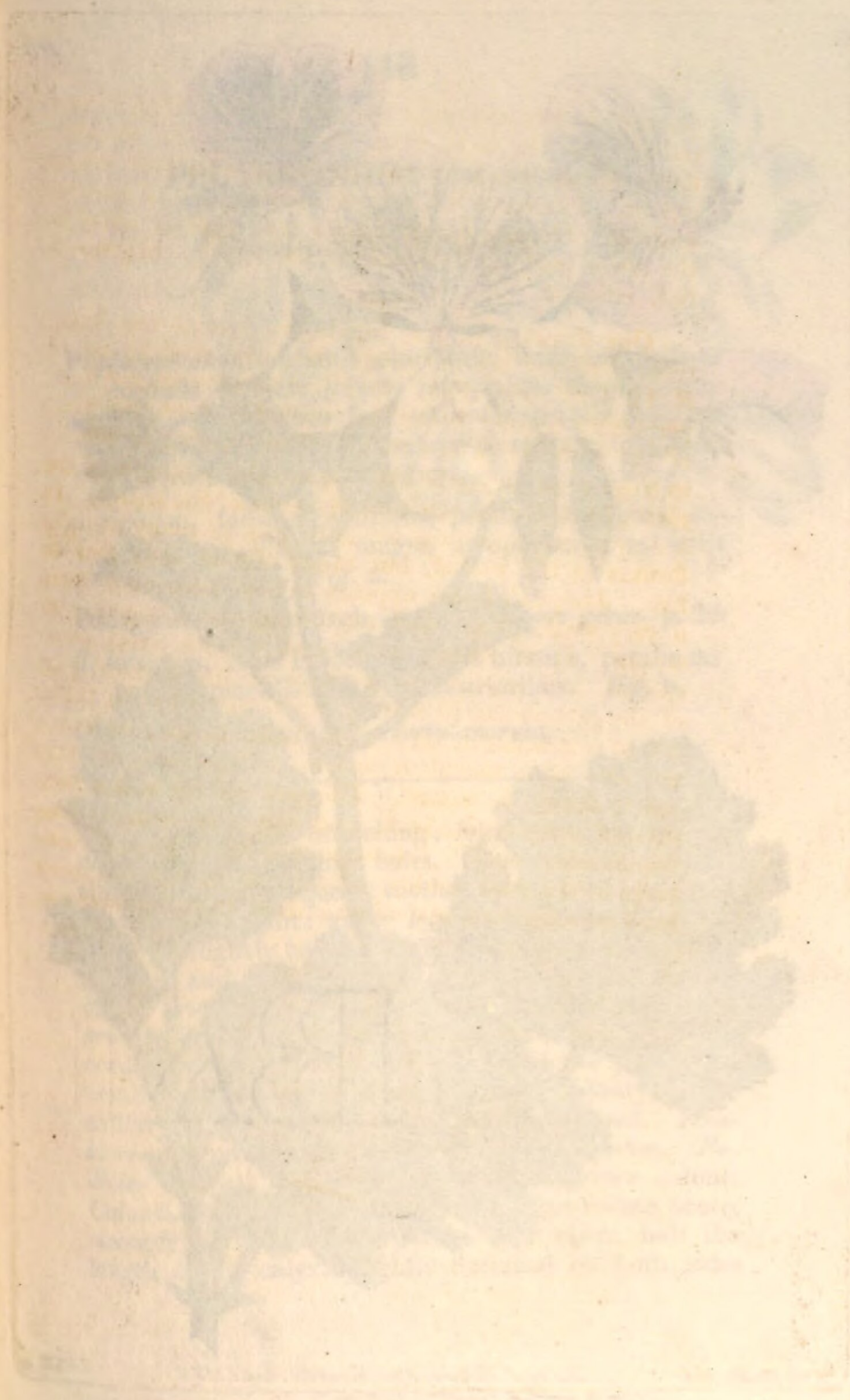
Pelargonium fragile. Willden. *sp. pl.* 3. p. 686. *Pers.*
syn. 2. p. 233. *Hort. Kew. ed.* 2. v. 4. p. 181.

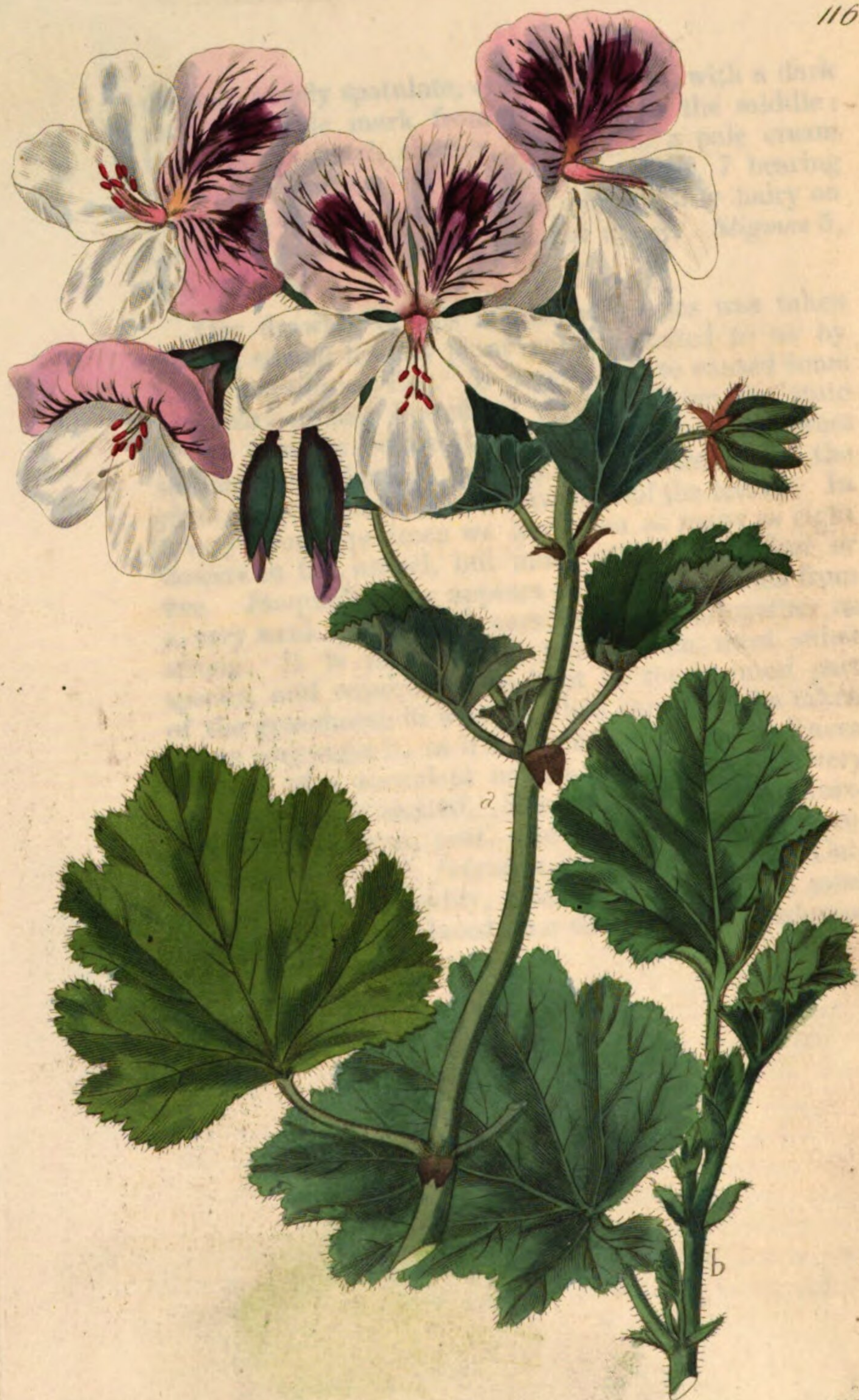
Geranium fragile. Andrews's *reposit.* 37.

Stem shrubby, branching; *branches* flexuose, long and slender, very brittle and easily broken, thickly clothed with soft unequal hairs. *Leaves* glaucescent, ternate, fleshy, thickly clothed on both sides with small pellucid hairs: *leaflets* nearly sessile, wedge-shaped, unequally cut and toothed; middle one three-parted and longer than the side ones. *Petioles* unequal in length, a little flattened on the upper side and rounded on the lower. *Stipules* short, cordate, acute. *Peduncles* several-flowered, cylindrical, hairy. *Involucre* of 4 or 5 ovate concave bractes, either entire or sometimes toothed at the point. *Calyx* 5-cleft, segments very unequal; sometimes toothed, strongly ribbed, upper one ovate, the others varying from lanceolate to subulate. *Nectariferous tube* sessile, flattened and channelled on both sides, about three times as long as the calyx, thickly covered with short hairs. *Petals* 5, the 2 up-

permost widely spatulate, cream-coloured, with a dark reddish purple mark from the base to the middle; lower petals much shorter, ligulate, of a pale cream colour. *Filaments* 10, united at the base, 7 bearing anthers. *Germen* hairy. *Style* red, slightly hairy on the lower part and smooth on the upper. *Stigmas* 5, red, reflexed.

Our drawing of this handsome species was taken from a strong healthy plant communicated to us by R. H. Jenkinson, Esq. It seems to have caused some perplexity among botanists; probably from the state of the samples before them. The number of flowers in the umbel depends entirely on the strength of the plant, likewise the size and divisions of the leaves. In a very strong specimen we have seen as many as eight flowers in the umbel, but much oftener only four or five. Jacquin's figure appears to have been made from a very weak plant, and ours from one altogether as strong. It is rather more tender than most other species, and requires to be kept in the warmest part of the greenhouse in winter, when care must be taken not to overwater it, as it is very liable to rot; its leaves are also of a succulent nature, so that they are very apt to decay, if wetted. The best soil for it is a mixture of turfy loam, peat, and sand, the same as recommended for *P. fulgidum* and its relatives. Cuttings strike root readily, planted in pots in the same kind of soil, and placed on a shelf in the greenhouse.





G. D. Smith. del.

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J. Watts. sc.

PELARGONIUM platypetalon.

Broad-petaled Stork's-bill.

P. platypetalon, umbellis plurifloris, foliis inferioribus cordatis obsolete lobatis inæqualiter dentatis hirsutis; superioribus basi cuneatis, petalis omnibus rotundato-obovatis; superioribus reflexis, tubo nectarifero calyce duplo breviori.

α. rigidum, foliis rigidioribus, petalis latioribus: superioribus macula magna atropurpurea et striis ramosis pictis. *Fig. a.*

Pelargonium Oldenburgh, major. *Hoare geran. p. 28.*

β. hirsutum, foliis latioribus magis hirsutis, petalis minoribus maculis et striis obscurioribus. *Fig. b.*

Oldenburgh Geranium. Hortulanorum.

Stem shrubby, branching; *branches* erect, thickly covered with soft villous hairs. *Lower leaves* cordate, slightly lobed, unequally toothed; teeth ending in a blunt callous point: *upper leaves* wedge-shaped at the base, all slightly hairy. *Petioles* shorter than the leaf, flattened and channelled on the upper side and convex on the lower, thickly clothed with soft villous hairs, as are the stipules, peduncles, involucre and calyx. *Stipules* cordate, acute, often deeply cloven at the point, generally toothed and ciliate. *Peduncles* solitary, either axillary or opposite to the leaf, 3 to 5 flowered. *Involucre* of several lanceolate acute fringed bractes. *Pedicles* unequal in length, of a reddish brown colour. *Calyx* 5-cleft, segments erect, unequal, lanceolate, acute, strongly nerved. *Nectariferous tube* about half the length of the calyx, slightly flattened on both sides

and gibbous at the base. *Petals* 5, roundly obovate, the two uppermost of a blush colour, marked in the centre with a dark purple spot, which joins numerous dark crimson lines that branch in various directions; lower ones white, tinged with blush. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* of a brown orange colour. *Germen* silky. *Style* smooth, purple. *Stigmas* 5, purple and revolute.

The specimen from which our drawing and description were taken, was kindly communicated to us by Sir R. C. Hoare, at the same time with another, which he considered as a red variety; but this differs so much, both in leaf and form of the petals, that we have not ventured to add it as a variety. At the bottom of the plate we have added a branch of another variety which is now common in most nurseries: it differs chiefly in its leaves being more hairy, in its flowers being less and not so much marked. They are both very hardy plants, and thrive well in a mixture of turfy loam and peat, or any light vegetable mould; and a common greenhouse, or light airy room, is sufficient shelter for them in winter. Cuttings soon strike root, planted in pots and placed in a sheltered situation.

Stem shrubby, branching; branches erect, thickly covered with soft villous hairs. Lower leaves cordate, slightly lobed, irregularly toothed; teeth ending in a blunt caudate point: upper leaves wedge-shaped at the base, all slightly hairy. Petioles shorter than the leaf, flattened and channelled on the upper side and convex on the lower, thickly clothed with soft villous hairs, as are the stipules, peduncles, involucre and calyx. Stipules cordate, acute, often deeply cloven at the point, generally toothed and ciliate. Peduncles solitary, either axillary or opposite to the leaf, 3 to 5 flowered. Involucres of several lanceolate acute fringed bristles. Petioles axillary in length, of a reddish brown colour. Calyx 5-lobed, segments erect, unequal, lanceolate, acute, strongly nerved. Petaloides, tube about half the length of the calyx, slightly flattened on both sides





PELARGONIUM *Scarboroviæ*.

Countess of Scarborough's Stork's-bill.

P. Scarboroviæ, umbellis 3-4 florisve, foliis subtrifidis glabris rigidis inæqualiter argute dentatis: segmentis inferioribus divaricatis superioribus trilobis, stipulis cordatis acuminatis, tubo nectarifero calyce parum breviori.

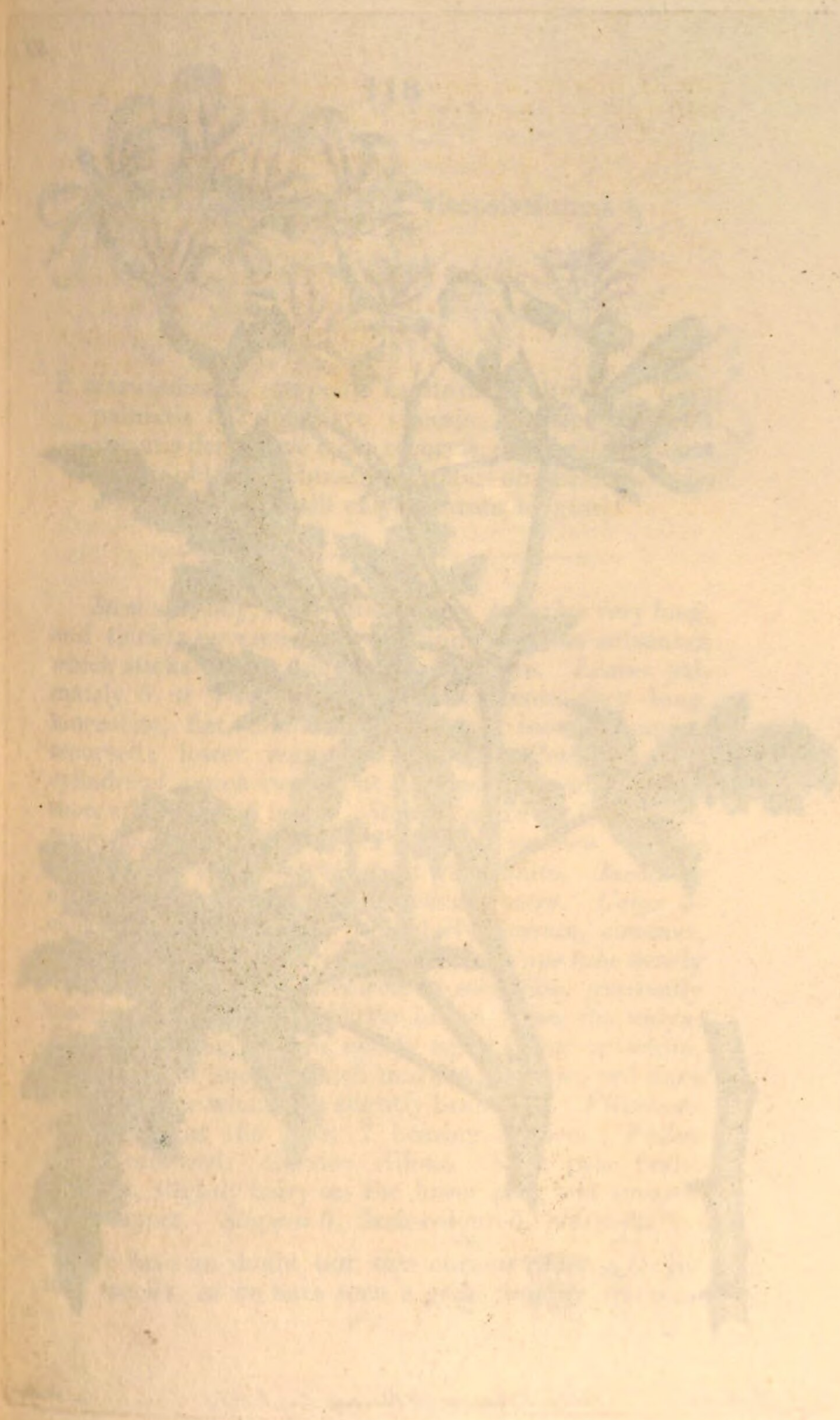
Lady Scarborough's Geranium. *Hortulanorum.*

Stem shrubby, branching: *branches* long, slenderish, smooth and shining, but thinly covered with short white unequal hairs. *Leaves* small, about as wide as long, subtrifid or deeply 3-lobed, smooth, rigid, deeply but unequally toothed with sharp rigid teeth and finely ciliated round the edges: lower segments spreading, upper one much larger and 3-lobed. *Petioles* scarcely the length of the leaf, upper ones much shorter, flattened and slightly furrowed on the upper side and convex on the lower, clothed with short stiff hairs, as are the nerves of the leaves, peduncles, and calyx. *Stipules* cordate, acuminate, rarely toothed, margins reflected. *Peduncles* axillary or opposite to the leaf, nearly cylindrical, 3 or 4 flowered. *Involucre* of about six unequal, lanceolate, acute, keeled bractes. *Pedicles* longer than the nectariferous tube. *Calyx* 5-cleft, segments unequal, erect, lanceolate, acuminate. *Nectariferous tube* flattened on each side, gibbous at the base, scarcely as long as the calyx. *Petals* 5, obovate, the two uppermost largest, red or pink with a dark velvety spot in the centre, and from it and the base branch several dark lines: lower petals pale lilac, sometimes a little stained with red. *Filaments* 10, united at the

base, 7 bearing anthers. *Germen* and *aristæ* villous. *Style* red, very hairy. *Stigmas* 5, red, reflexed.

Our drawing of this handsome plant was taken at the collection of Robert H. Jenkinson, Esq. who received it from the Countess of Scarborough, in whose collection it had been raised from seeds, and it is named in compliment to her. We suspect it to be of hybrid origin, and it appears to be intermediate between *P. obtusilobum* and one of the citron-scented kinds. It begins flowering early in spring, and continues to bloom in succession all through the summer; it has also a pleasant lemon-like scent. It thrives well in a mixture of turfy loam and peat, and cuttings root freely planted in pots and placed on a shelf in the greenhouse.

Stems shrubby, branching: branches long, slender, smooth and shining, but thinly covered with short white unequal hairs. Leaves small, about as wide as long, subcordate or deeply 3-lobed, smooth, rigid, deeply but unequally toothed with sharp rigid teeth and finely ciliated round the edges: lower segments spreading, upper one much larger and 3-lobed. Petioles scarcely the length of the leaf, upper ones much shorter, flattened and slightly furrowed on the upper side and convex on the lower, clothed with short stiff hairs, as are the nerves of the leaves, petioles, and calyx. Stipules cordate, acuminate, rarely toothed, margins reflected. Panicles axillary or opposite to the leaf, nearly cylindrical, 3 or 4 flowered. Anthers of about six unequal, lanceolate, acute, keeled bracts. Petals longer than the nectariferous tube. Calyx 5-lobed, segments unequal, erect, lanceolate, acuminate. Nectariferous tube flattened on each side, gibbous at the base, scarcely as long as the calyx. Petals 5, obovate, the two uppermost largest, red or pink with a dark velvety spot in the centre, and from it and the base branch several dark lines: lower petals pale lilac, sometimes a little stained with red. Filaments 10, united at the





PELARGONIUM viscosissimum.

Viscous Stork's-bill.

P. viscosissimum, umbellis capitatis multifloris, foliis palmatis 5-7 lobatisve viscosis; segmentis planis sinuatis dentatisve apice recurvis, caule viscosissimo, petalis oblongis obtusis, calycibus obtusissimis, tubo nectarifero subsessili calyce parum longiori.

Stem shrubby, erect, branching; *branches* very long, and thickly covered with a shining viscous substance which sticks to the fingers like birdlime. *Leaves* palmately 5 or 7-lobed, clammy, segments very long, lanceolate, flat, sinuate and bluntly toothed, apices recurved; lower segments divided. *Petioles* nearly cylindrical, much swollen at the base and covered with short stiff pellucid hairs. *Stipules* narrowly lanceolate, taper-pointed, recurved. *Peduncles* swollen at the base, thickly covered with short white hairs. *Involucre* of about 6 cordately ovate concave bractes. *Calyx* 5-cleft, segments unequal, orbicularly obovate, concave, very blunt, points incurved. *Nectariferous tube* nearly sessile, flattened and furrowed on each side, gradually tapering downwards, a little longer than the calyx. *Petals* 5, oblong, obtuse, nearly equal, lilac or white, the two upper ones are each marked with two red lines from the base which are slightly branched. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* pale flesh-coloured, slightly hairy on the lower part and smooth on the upper. *Stigmas* 5, flesh-coloured, reflexed.

We have no doubt but this curious plant is a distinct species, as we have seen a great number of them

raised from Cape seeds with scarcely any variation in them. We believe it has been generally considered as a variety of *P. glutinosum*, but it certainly differs more from that than that does from *P. quercifolium*: both the habit of the plant, and the form of the leaves and flowers, are altogether totally dissimilar; the whole plant is covered with a shining viscous substance which sticks to the fingers on the slightest touch. It is a tall strong-growing plant and very hardy, requiring only a common greenhouse or warm room to protect it in winter. A mixture of turfy loam and peat suits it very well, or any light vegetable mould, and cuttings strike root freely if planted in pots and placed in a sheltered situation.

Our drawing was taken at the Nursery of Messrs. Colvill, from a plant that was raised from seed that had been received from the Cape.



C. D. Smith. del.

Pub. by J. Ridgway 170 Piccadilly June. 1. 1822.

J. Walts sc.

GERANIUM pilosum.

Pointed-anthered Crane's-bill.

G. pilosum, pedunculis bifloris, foliis oppositis reniformibus quinquepartitis pilosis; segmentis palmatifidis obtusis, petalis emarginatis calyce duplo longioribus, antheris mucronatis, caule erecto dichotomo.

Geranium pilosum. Willd. *sp. pl.* 3. p. 706. Pers. *syn.* 2. p. 235.

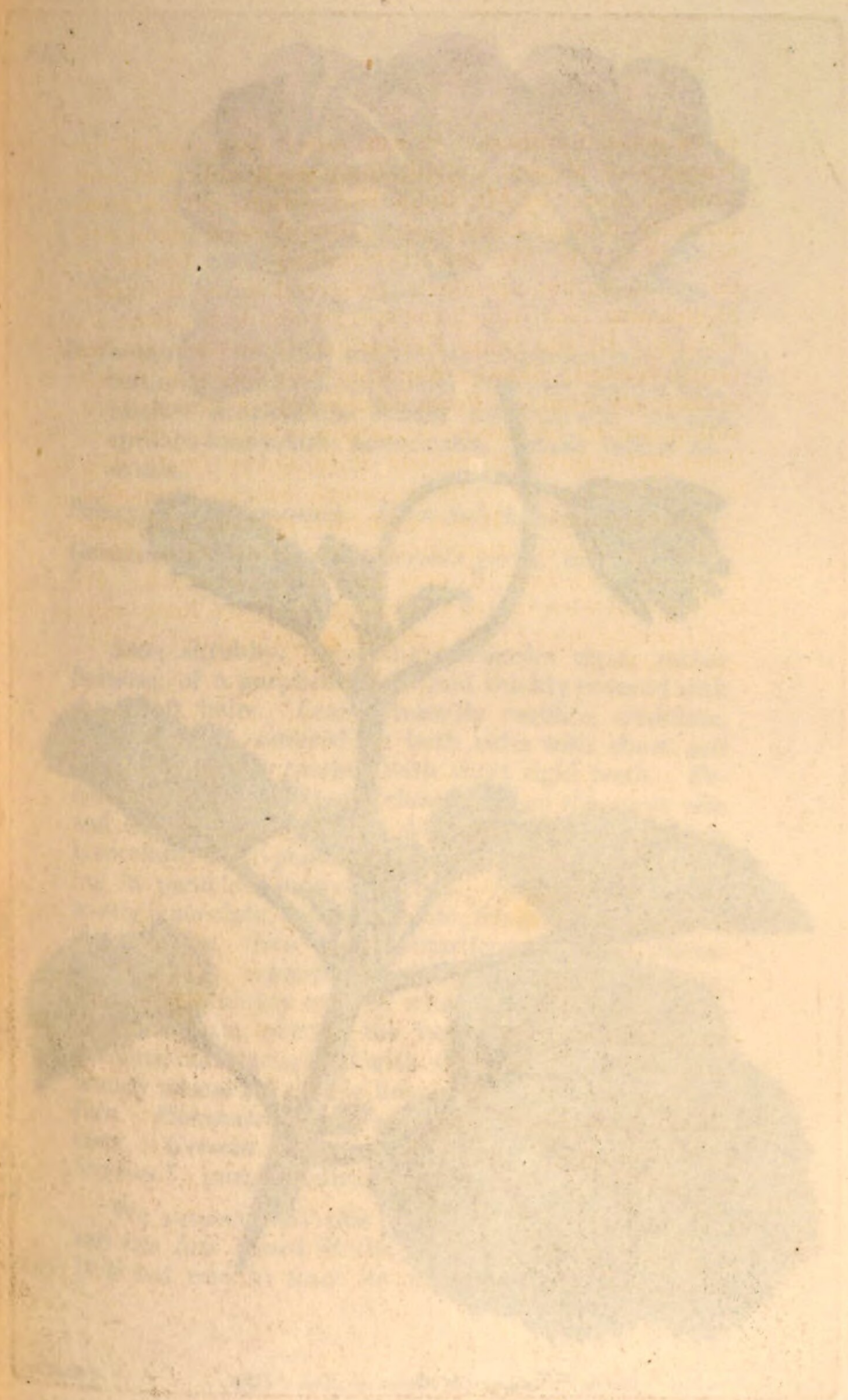
Perennial? Stems forked, erect, a little swollen at the joints, thickly clothed with white reflexed hairs. Leaves opposite, reniform, generally 5-parted, hairy on each side; segments palmately divided, very bluntly rounded at the points and ciliate. Petioles long and slender, flattened on the upper side and convex on the lower, thickly covered with white recurved hairs. Stipules subulately lanceolate, acuminate, membranaceous, generally forked. Peduncles axillary, 2-flowered. Involucre of 4 small subulate unequal membranaceous bractes. Pedicles slender, curved at the points. Calyx of 5 widely lanceolate, unequal, fringed, spreading sepals, villous, and terminated with a very hairy arista. Petals 5, equal, widely obovate, slightly emarginate, about twice the length of the calyx, of a bright reddish lilac, paler at the base. Filaments 10, connected at the base, all bearing perfect anthers. Anthers incumbent, nearly orbicular, 2-lobed and terminated with a sharp point. Pollen sulphur-coloured. Capsules and aristæ hairy. Stigmas 5, blunt, reflexed.

This curious little species is a native of New Zealand, and differs from all others that we have examined

in its pointed anthers. It was raised last year at the Nursery of Messrs. Colvill, from seeds collected and brought home by Mr. John Richardson, with a great quantity of other curious seeds from New Zealand and New Holland. We have determined it to be the *G. pilosum* from fine specimens preserved in the Banksian Herbarium, from which the species was first named by Forster. In the same Herbarium is another species nearly related; likewise one from New Holland, which is also very similar. From its appearance we suspect it will prove to be hardy, or at any rate to require nothing but a frame to protect it in severe frost. We believe it will prove to be perennial, but that remains to be ascertained. It is a neat little species, and continues to flower abundantly; its seeds also ripen plentifully, so that it may be easily preserved. It thrives well with us in a mixture of sandy loam and peat; and if kept in the greenhouse, it requires a light airy situation.

the joint, thickly clothed with white reflexed hairs. Leaves opposite, reniform, generally 5-parted, hairy on each side; segments palmately divided, very bluntly rounded at the points and ciliate. Petioles long and slender, flattened on the upper side and convex on the lower, thickly covered with white recurved hairs. Stipules subulately lanceolate, acuminate, membranous, cross, generally forked. Peduncles axillary, 2-flowered. Bractlets of 4 small subulate imbricated membranaceous bracts. Petioles slender, curved at the points. Calyx of 5 widely lanceolate, ungued, fringed, spreading sepals, yellow, and terminated with a very hairy aristula. Petals 5, equal, widely obovate, slightly emarginate, about twice the length of the calyx, of a bright reddish lilac, paler at the base. Filaments 10, connected at the base, all bearing perfect anthers. Anthers incumbent, nearly orbicular, 2-lobed and terminated with a sharp point. Pollen sulphur-coloured. Capsules and axis hairy. Stigma 5, blunt, reflexed.

This curious little species is a native of New Zealand, and differs from all others that we have examined





PELARGONIUM formosum.

Variegated-flowered Stork's-bill.

P. formosum, umbellis multifloris subpaniculatis, foliis rotundato-cordatis undulatis concavis rigidis simpliciter denticulatis subtus multinerviis, stipulis cordato-lanceolatis acuminatis, petalis inferis obovatis.

Pelargonium formosum. Hort. Sub. Lond. p. 151. n. 81.

Geranium formosum. Andrews's geran. c. ic.

Stem shrubby, branching; *branches* rigid, rather flexuose, of a purplish colour and thickly covered with short soft hairs. *Leaves* roundly cordate, undulate, concave, rigid, covered on both sides with short soft hairs, and simply toothed with short rigid teeth. *Petioles* widely flattened and channelled on the upper side and convex on the lower, downy. *Stipules* cordately lanceolate, taper-pointed and fringed. *Peduncles* growing in panicles, many-flowered. *Involucre* of several widely lanceolate, concave, acute, fringed bractes. *Pedicels* longer than the nectariferous tube, villous. *Calyx* 5-cleft, segments straight, concave, lanceolate, acuminate, thickly covered with soft white hairs. *Petals* 5, obovate, obtuse, the two uppermost largest, of a reddish lilac variegated with white, and from the base branch numerous purple lines; lower petals of a light lilac. *Filaments* 10, united at the base, 7 bearing anthers. *Germen* villous. *Style* reddish, very hairy. *Stigmas* 5, purple, reflexed.

We suspect that this plant is a hybrid production, and was first raised at the Nursery of Messrs. Colvill. It is not easy to trace its origin, but it seems to be

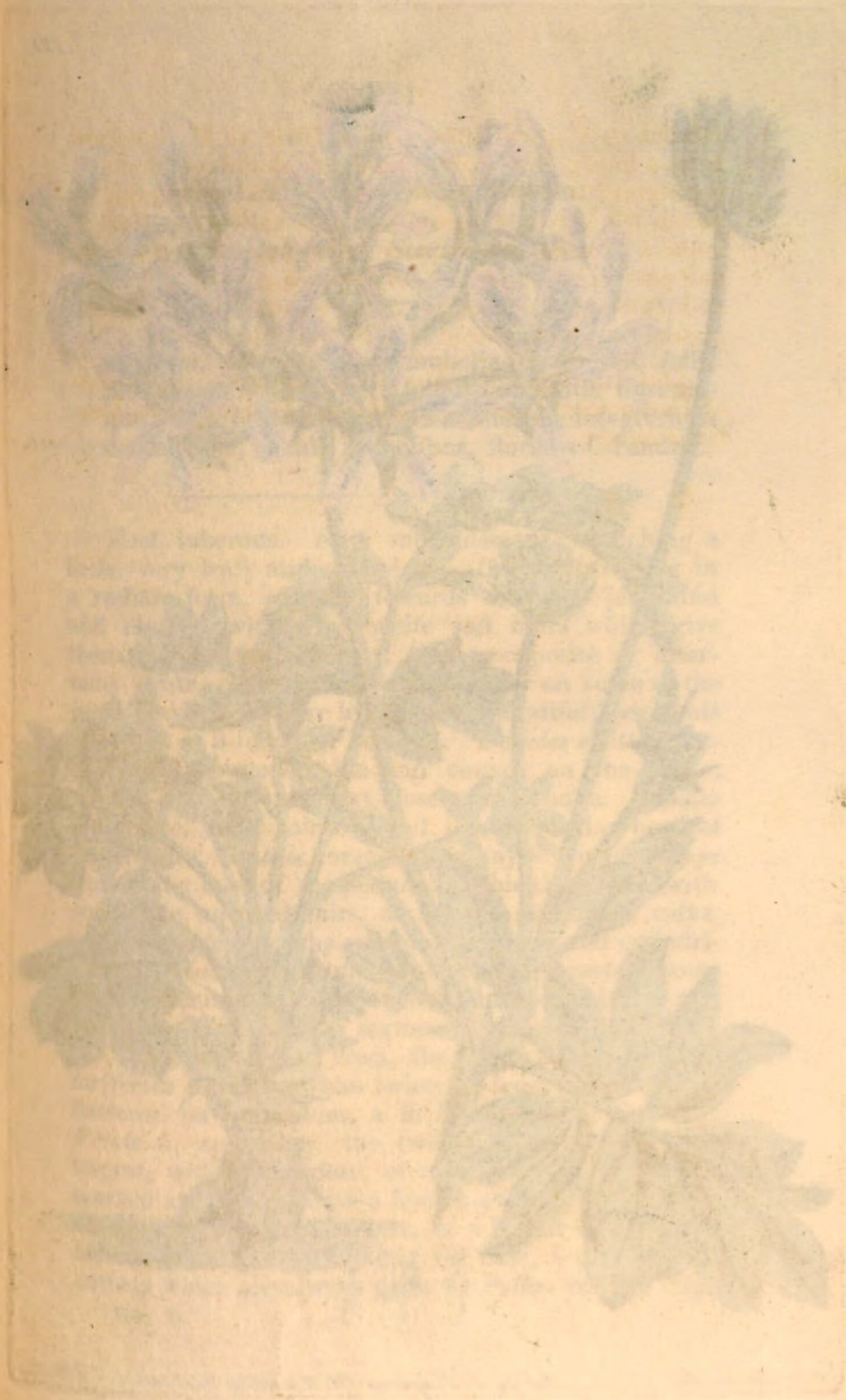
related to *P. cucullatum*, and a little to *P. cordatum*. It is a hardy free grower and an abundant bloomer, beginning to flower early in spring and continuing in bloom till late in autumn, when its variegated flowers make a pleasing appearance. A mixture of turfy loam and peat suits it very well, or any rich vegetable mould; and cuttings soon strike root, planted under hand-glasses or in pots placed in a sheltered situation.

Our drawing was taken at the extensive collection of Geraniaceæ belonging to Robert H. Jenkinson, Esq. last summer.

Pelargonium formosum. Hort. Sub. Lond. p. 151. n. 81.
Geranium formosum. Andrews's Germ. c. 16.

Stem shrubby, branching; branches rigid, rather flexuose, of a purplish colour and thickly covered with short soft hairs. Leaves roundly cordate, undulate, concave, rigid, covered on both sides with short soft hairs, and simply toothed with short rigid teeth. Petioles widely flattened and channelled on the upper side and convex on the lower, downy. Stipules cordately lanceolate, taper-pointed and fringed. Peduncles growing in panicles, many-flowered. involucre of several widely lanceolate, concave, acute, fringed bracts. Petals longer than the nectariferous tube, villous. Calyx 5-lobed, segments straight, concave, lanceolate, acuminate, thickly covered with soft white hairs. Petals 5, obovate, obtuse, the two uppermost largest, of a reddish lilac variegated with white, and from the base branch numerous purple lines; lower petals of a light lilac. Filaments 10, united at the base, 7 bearing anthers. Germen villous. Style reddish, very hairy. Stigmas 5, purple, reflexed.

We suspect that this plant is a hybrid production, and was first raised at the Nursery of Messrs. Colvill. It is not easy to trace its origin, but it seems to be





C. D. Smith. del.

Pub. by J. Ridgway 170 Piccadilly July 1. 1822.

J. Watts. sc.

PELARGONIUM amoenum.

Delightful Stork's-bill.

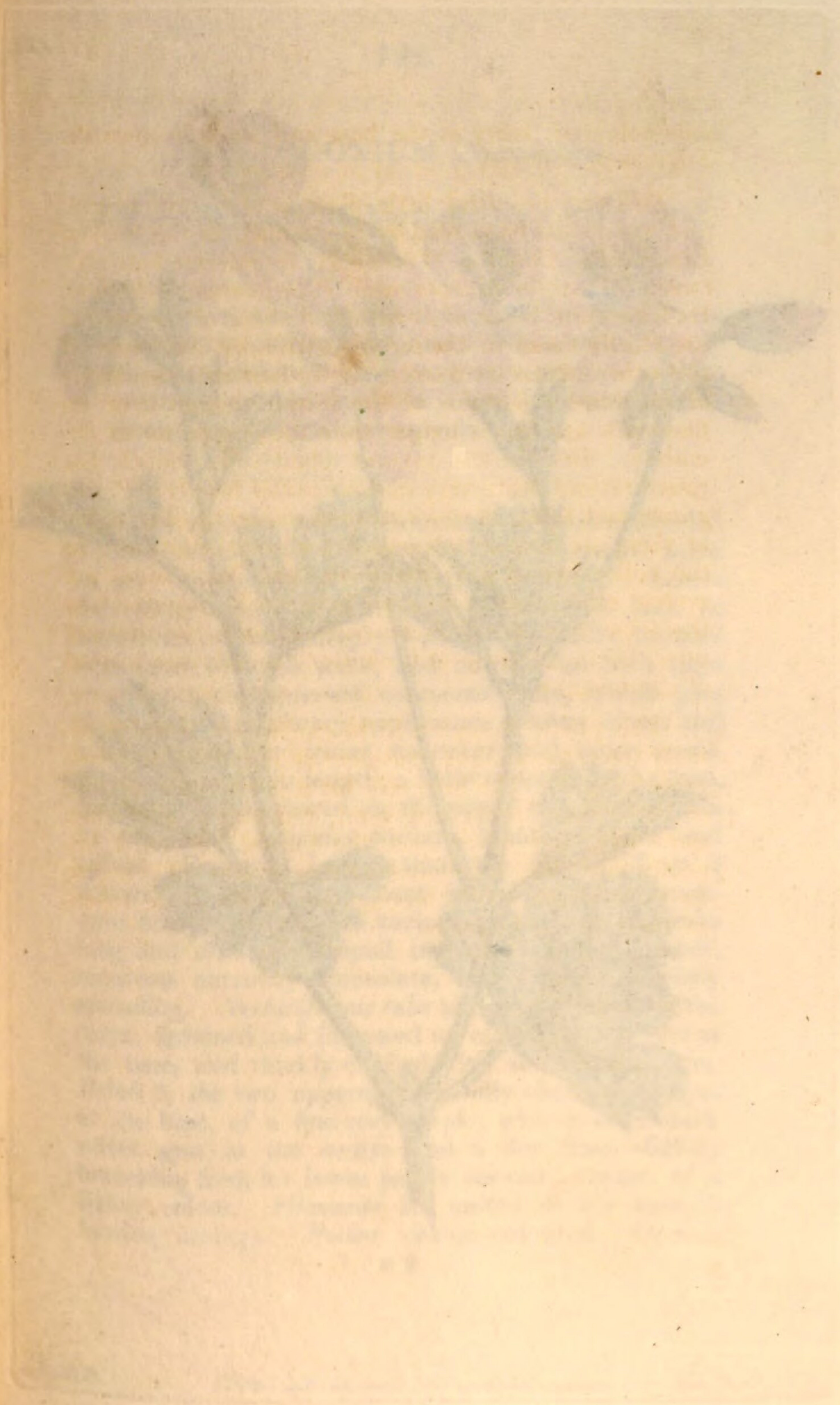
P. amoenum, subcaulescens, umbella composita, foliis pinnatis canescentibus; foliolis oppositis alternisque ovatis obtusis simplicibus bifidisve integerrimis dentatisque, petalis patentibus, floribus 6-7andris.

Root tuberous. *Stem* subcaulescent, branching a little, very leafy and succulent. *Leaves* spreading in a radiate form, pinnate, towards the point pinnatifid and clothed with short white soft hairs which give them a hoary appearance; *leaflets* opposite or alternate, ovate, obtuse, simple or bifid, or on some of the upper leaves the lower leaflets are pinnatifid; segments entire, 2 or 3 lobed or toothed. *Petioles* a little flattened on the upper side and convex on the lower, thickly clothed with short close-pressed hairs. *Stipules* lanceolate, taper-pointed, and joined to the base of the petioles. *Umbels* compound, many-flowered. *Scape* leafy at the base of the peduncles, thickly clothed with soft white unequal hairs, as are the peduncles, calyx, and nectariferous tube. *Peduncles* long and cylindrical. *Involucre* of numerous unequal bractes, some widely others narrowly lanceolate, taper-pointed and ciliate. *Calyx* 5-cleft, segments unequal, lanceolate, the upper one largest, erect, the others reflexed. *Nectariferous tube* more than twice the length of the calyx, flattened on both sides, a little gibbous at the base. *Petals* 5, spreading, the two uppermost much the largest, widely spatulate, of a bright salmon colour, marked at the base with a few short dark lines, lower ones much shorter, spatulate, of a lighter colour. *Filaments* 10, slightly united at the base, 6 or 7 bearing anthers which are always perfect. *Pollen* yellow. *Style*

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pale-coloured, hairy at the base and smooth upwards.
Stigmas 5, reflexed.

This very beautiful little plant is of hybrid origin, and was raised from seed by Mr. Smith, at the Earl of Liverpool's, Coombe Wood. It is intermediate between *Dimacria pinnata* and *Pelargonium fulgidum*. Its leaves and mode of growth and shape of the flowers are chiefly those of the former with a little mixture of the other, while its number of anthers and the colour of its flowers partake of the latter, though 2 of its filaments are much longer than the others, as in *Dimacria*. Besides the present plant, Mr. Smith has raised several other very curious mules between *P. fulgidum* and some of the tuberous-rooted species: some of them are now in flower and are very beautiful. In the collection of Mr. Jenkinson and Mr. Colvill are several others, and also some between *P. fulgidum* and the tribe to which *P. echinatum* belongs, so that our novelties in the tribe still continue to increase instead of diminishing.

This plant, though a little caulescent, requires exactly the same kind of treatment as the other tuberous-rooted kinds. The best soil for it is an equal mixture of turfy loam, peat, and sand, watering it only when quite dry, and never over the leaves. When it becomes dormant, it requires no more water till it begins to grow afresh. It is propagated by the little tubers of the root, or by seeds.





PELARGONIUM Comptoniæ.

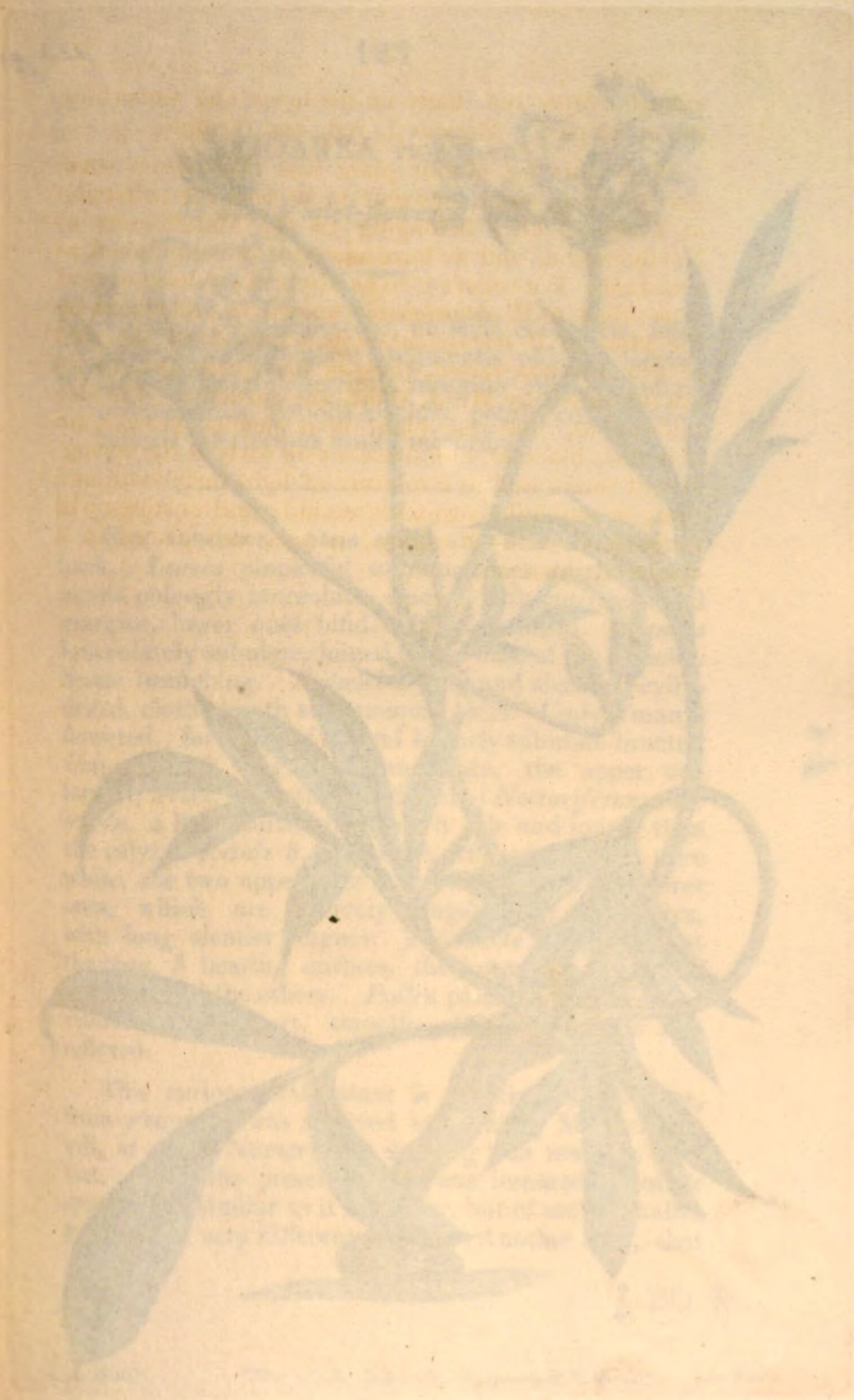
The Marchioness of Northampton's Stork's-bill.

P. Comptoniæ, umbellis 3-4 florisve, foliis planis basi cuneatis v. cordatis oblatis trilobis inæqualiter obtuse denticulatis: lobis divaricatis obtusis, stipulis cordatis obtusiusculis, calycibus patentibus, tubo nectarifero longitudine calycis.

Stem shrubby, much branched: *branches* slender, flexuose, thickly clothed with soft white unequal hairs, as are the petioles, peduncles, and calyx. *Leaves* flat, wider than long, wedge-shaped at the base or sometimes cordate, deeply 3-lobed, unequally toothed with short bluntish teeth, and covered on both sides with short close-pressed canescent hairs, which give them a kind of hoary appearance; lobes blunt and spreading: *upper leaves* narrower and more acute. *Petioles* unequal in length, a little widened at the base, flattened and furrowed on the upper side and convex on the lower. *Stipules* cordate, bluntish, entire and ciliate. *Peduncles* longer than the leaves, 3 or 4 flowered. *Involucre* of about 4 cordate, acute, concave bractes, which are keeled and ciliate. *Pedicles* long and slender, unequal in length. *Calyx* 5-cleft, segments narrowly lanceolate, taper-pointed, slightly spreading. *Nectariferous tube* about the length of the calyx, flattened and furrowed on each side, gibbous at the base, and thickly clothed with short white hairs. *Petals* 5, the two uppermost roundly obovate, oblique at the base, of a fine rosy purple, with a large dark velvet spot in the centre and a few lines slightly branching from it: lower petals obovate, obtuse, of a lighter colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen*

villous. *Style* red, hairy on the lower and smooth on the upper part. *Stigmas* 5, red, and revolute.

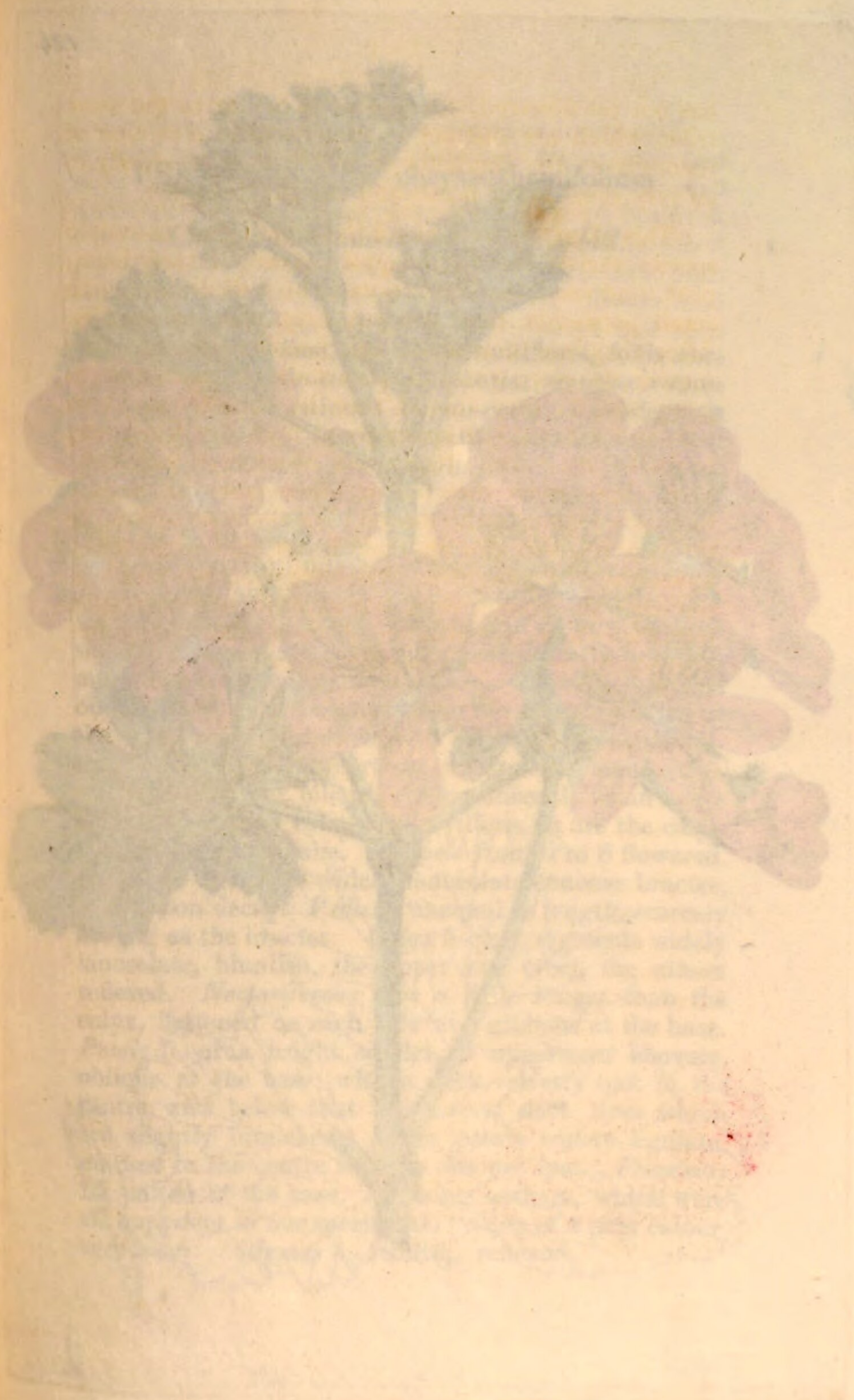
Our drawing of this plant was taken from some fine flowering specimens sent to us from the collection at Castle Ashby, belonging to the Marchioness of Northampton, and we have named it in compliment to that Lady. We believe it to be a hybrid production, and it is allied to *P. obtusilobum* (known in collections by the name of *P. tricuspidatum rubrum*), from the seed of which it was raised, three or four years ago, as we are informed, by Mr. J. West, the gardener. He also informs us, that the plant is a slender grower, an abundant bloomer, and flowers very early in the spring. It will thrive well in a mixture of light turfy loam and peat, or any light vegetable mould; and cuttings will strike root readily if planted in pots and placed in a sheltered situation.



has not yet flowered, we suspect to belong to the same tribe, which are distinct enough to form a section of themselves; the character of which consists chiefly in its very short lower petals and one short stamen.

This plant, as well as all the other tuberous-rooted species, thrives best in an equal mixture of turfy loam, peat, and sand, and their pots to be well drained with small potsherds, that the wet may pass off readily. After they lose their leaves and become dormant they require no more water till they show an inclination to grow afresh; they should then be shifted into fresh pots and watered but sparingly at first, but when they begin to grow freely they must be watered regularly, particularly when they are in bloom; at that season they also require to be moved to a shady situation, or the hot sun will dry up their leaves and make them unhealthy and unsightly. We have observed this season that the plants in a hot exposed situation soon lost their leaves, whilst those in a cool shady one continue to grow and flower abundantly.

This curious little plant is a native of the Cape, from whence it was received last year by Messrs. Colvill, at whose Nursery our drawing was made in May last. With the present plant was imported another species very similar to it in flower, but of much smaller growth and very different foliage. Another root, that





PELARGONIUM chrysanthemifolium

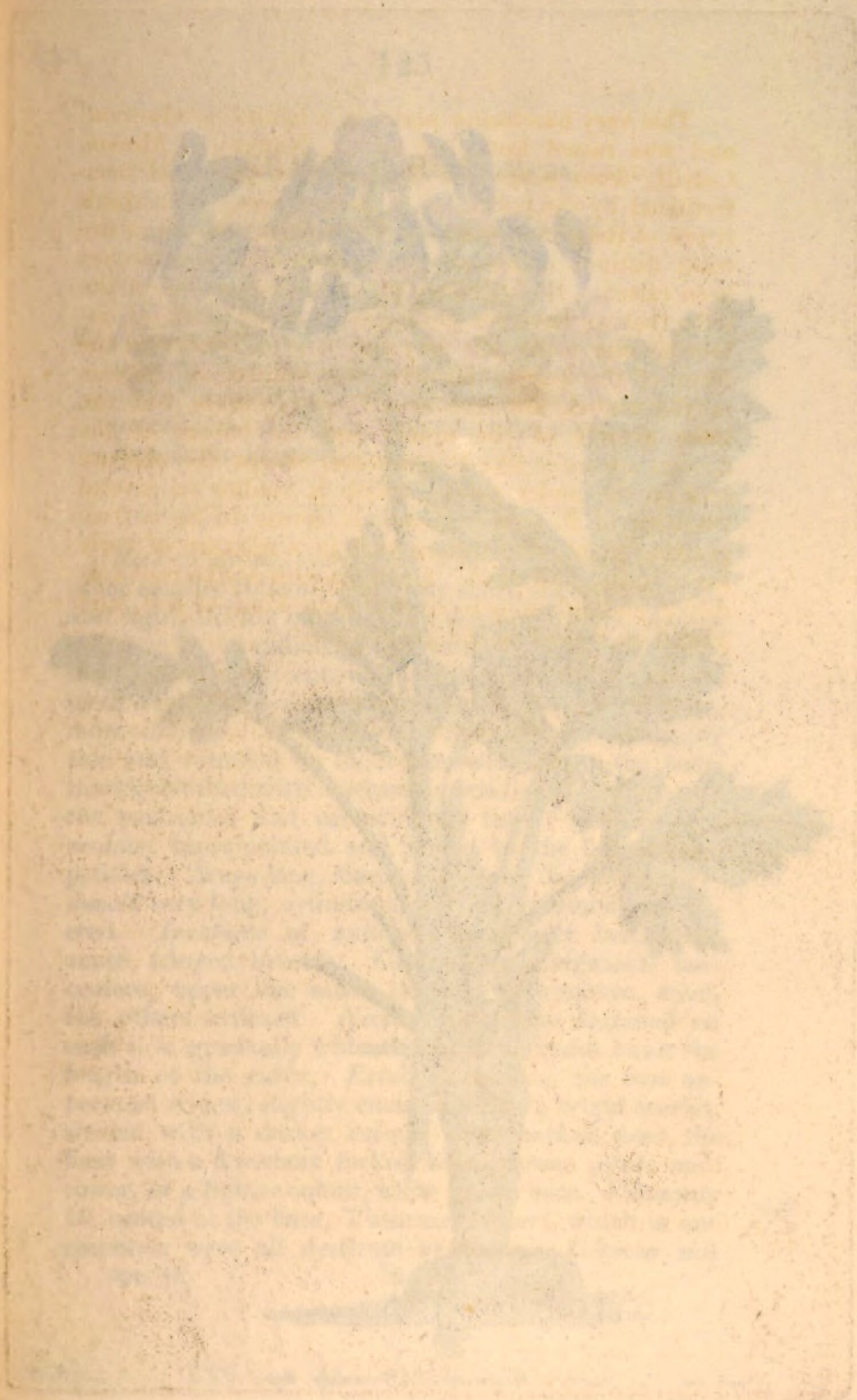
Chrysanthemum-leaved Stork's-bill.

P. chrysanthemifolium, umbellis multifloris, foliis cordatis pinnatifido-subseptemlobatis: sinubus rotundatis crenatis, stipulis oblato-cordatis subdentatis acutis, petalis inferis ligulatis, calycibus reflexis, tubo nectarifero calyce longiori.

Stem shrubby, much branched; *branches* thickly clothed with soft villous hairs. *Leaves* cordate, pinnatifid or deeply 7-lobed, crenate and clothed on both sides with short soft hairs; *segments* bluntly rounded, more or less lobed, seldom entire. *Petioles* flattened on the upper side and convex on the lower, dilated at the base, thickly clothed with soft white unequal villous hairs. *Stipules* cordate, wider than long, generally toothed and ciliate, ending abruptly in an acute point. *Peduncles* cylindrical, villous, as are the calyx and nectariferous tube. *Umbels* from 6 to 8 flowered. *Involucre* of 6 or 8 widely lanceolate concave bractes, which soon decay. *Pedicles* unequal in length, scarcely as long as the bractes. *Calyx* 5-cleft, segments widely lanceolate, bluntish, the upper one erect, the others reflexed. *Nectariferous tube* a little longer than the calyx, flattened on each side and gibbous at the base. *Petals* 5, of a bright scarlet, 2 uppermost obovate, oblique at the base, with a dark velvety spot in the centre, and below that are several dark lines which are slightly branched; lower petals widely ligulate, marked in the centre with an obscure spot. *Filaments* 10, united at the base, 7 bearing anthers, which were all imperfect in our specimens. *Style* of a pale colour, very hairy. *Stigmas* 5, reddish, reflexed.

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This very handsome plant is a hybrid production, and was raised last year at the Nursery of Messrs. Colvill, from a seed of *P. ignescens* that had been fertilized by the pollen of *P. quercifolium*. We think it one of the handsomest, and it certainly is one of the most distinct mules of the shrubby kind that has yet been raised. Its brilliancy of colour exceeds all of the tribe that we have yet published, and no artificial colouring can come any way near it. Its habit and the form of the leaves, likewise the number of flowers in the umbel, are very near *P. quercifolium*, but the loose growth of the umbel and the colour of the flowers are more like *P. ignescens*, except the obscure spot on the under petals, which is similar in several varieties of *P. quercifolium*. It seems to be a free-growing plant, and thrives well in a mixture of turfy loam, peat, and sand. Cuttings also strike root readily if planted in pots in the same kind of soil, and placed on a shelf in the greenhouse.





C.D. Smith. del.

Pub by J. Ridgway 170 Piccadilly Aug. 1. 1822.

J. Watts.

PELARGONIUM patens.

Spreading-flowered Stork's-bill.

P. patens, umbellis multifloris subsimplicibus, foliis ternatis: foliolis sessilibus inciso-dentatis obtusis, caule carnosio suffruticoso erecto, petalis ligulatis patentibus, calycibus reflexis, tubo nectarifero calyce duplo longiori.

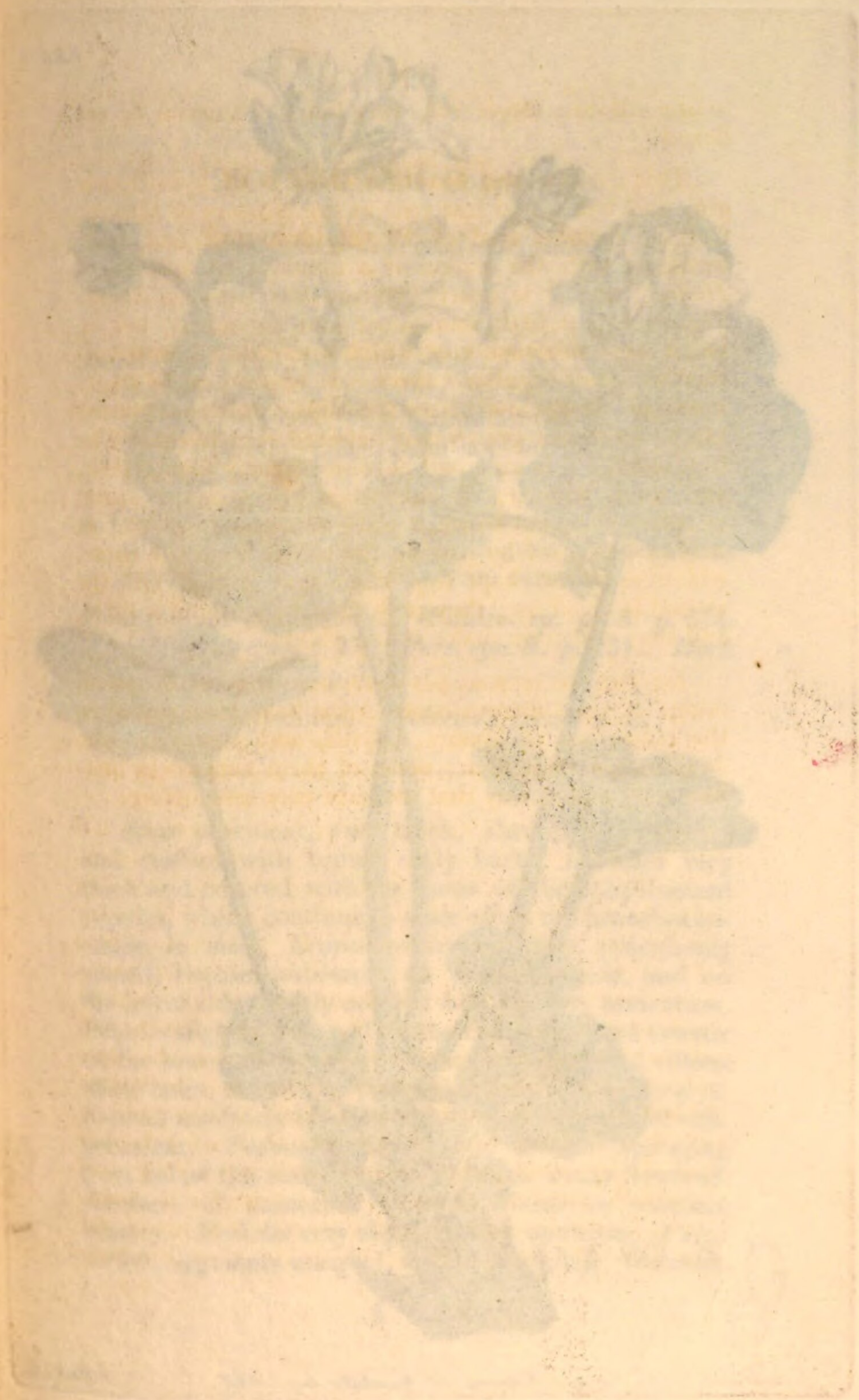
Root tuberous, very large and branched out into other smaller tubers. *Stem* very short, succulent, erect, and rigid, thickly clothed with short soft hairs. *Leaves* growing in a radiate form, ternate: *leaflets* sessile, blunt, unequally cut and toothed with very blunt teeth; middle one much longer than the side ones, more divided. *Petioles* long, flattened on the upper side and rounded on the lower, widened at the base, thickly clothed with unequal spreading hairs, as are the peduncles and nectariferous tube. *Stipules* lanceolate, taper-pointed and joined to the base of the petioles. *Scape* long, simple? leafy at the joint. *Peduncle* very long, cylindrical, in our specimen 15-flowered. *Involucre* of numerous narrowly lanceolate, acute, fringed bractes. *Calyx* 5-cleft, segments lanceolate, upper one much the largest, concave, erect, the others reflexed. *Nectariferous tube* flattened on each side, gradually widened upwards, about twice the length of the calyx. *Petals* 5, ligulate, the two uppermost widest, slightly emarginate, of a bright scarlet, shaded with a darker colour, and marked near the base with a few short forked lines; lower petals narrower, of a lighter colour, white at the base. *Filaments* 10, united at the base, 7 bearing anthers, which in our specimen were all destitute of pollen. *Germen* and

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aristæ villous. *Style* red, very hairy. *Stigmas* 5, reflexed.

This curious and beautiful plant is of hybrid origin, and was raised last year at the Nursery of Messrs. Colvill, from a seed of *P. fulgidum* that had been fertilized with the pollen of a nondescript species of *Hoarea*, and it is nearly intermediate between them. The stem is a little caulescent and succulent, but it has a large tuberous root which branches off into numerous other smaller tubers. It appears to be easily managed if treated like the other tuberous-rooted kinds, as it has grown and flowered very freely. The best soil for it is an equal portion of turfy loam, peat, and sand, watering it only when in a growing state, as it would be apt to rot if watered when dormant. It may be increased by parting the tubers from the roots, which must be kept dry when first potted till the wound is dried up; they may then be watered a little, and they will soon make young plants.

Besides the present plant, numerous other beautiful mules of the tuberous-rooted tribe have been raised in the collection of Messrs. Colvill, and others in Mr. Jenkinson's collection; some of them surpass in brilliancy of colour any that we have ever seen before.





ISOPETALUM Cotyledonis.

Hollyhock-leaved Isopetalum.

Isopetalum. Cal. 1-sepalus, 5-pal.: as: lacinia suprema desinente in foveolum nectariferum. Pet. 5 æqualia, rugosa. Stam. tubo brevissimo: 5-6 fertilia patentia apice incurva; sterilia inæqualia subulata incurva.

I. *Cotyledonis*, pedunculis proliferis: umbellis compositis, foliis cordatis peltatis rugosis pubescentibus subtus tomentosis, caule crasso carnosio.

Pelargonium Cotyledonis. Willden. sp. pl. 3. p. 674.

L'Hérit. geran. t. 27. Pers. syn. 2. p. 231. Hort.

Kew. ed. 2. v. 4. p. 175.

Geranium Cotyledonis. Andrews's geran. c. ic.

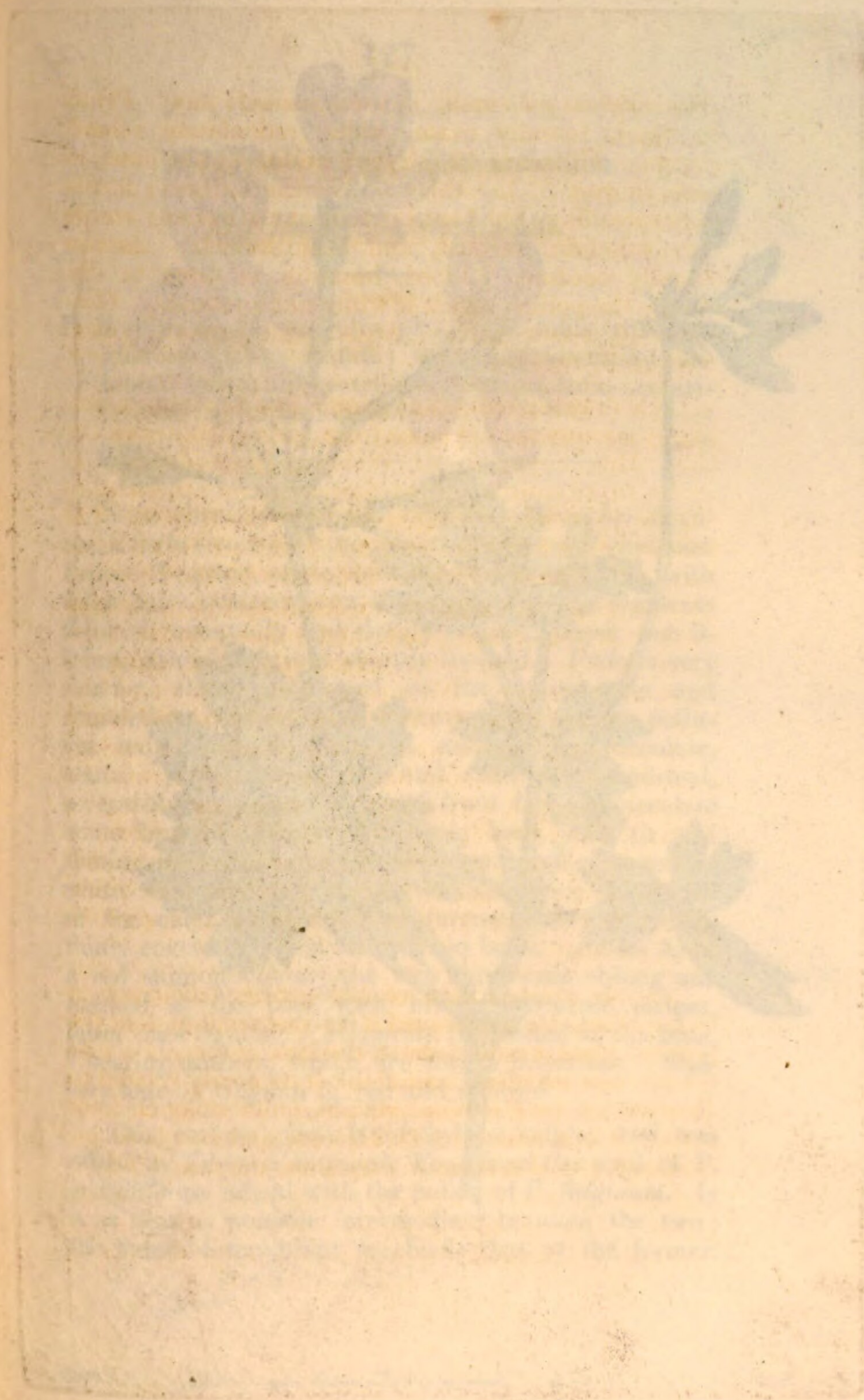
Stem succulent, very thick, shrubby, branching, and clothed with brown scaly bark; *branches* very thick and covered with the bases of the subpersistent stipules, which continue to scale off as the branches increase in size. *Leaves* peltate, cordate, reticulately veined, rugose, pubescent on the upper side, and on the lower side thickly covered with a silvery tomentum. *Petioles* slightly flattened on the upper side and convex on the lower, very thickly clothed with unequal villous white hairs, as are the peduncles, pedicles, and calyx. *Stipules* cordately lanceolate, acute, fringed, and subpersistent. *Peduncles* proliferous, several springing from below the main umbel. *Umbels* many-flowered. *Involucre* of numerous unequal linear or subulate bractes. *Pedicles* very slender, bent upwards. *Calyx* 5-cleft, segments unequal, widely lanceolate, bluntish.

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Nectariferous pit small, in some scarcely any. *Petals* 5, equal, roundly ovate, white, reticulately veined, rugose. *Filaments* 10, slightly united at the base, in some flowers 5, in others 6, bearing anthers; fertile ones spreading, but bent inwards at the points; sterile ones subulate, unequal, and bent inwards. *Anthers* roundly cordate, 2-lobed, bursting in front to discharge the pollen, which is white and granular. *Ger-men* and *aristæ* hairy. *Style* quite smooth, green. *Stigmas* 5, reflexed.

Our drawing was taken from a fine flowering plant, kindly communicated to us from the collection of the Hon. Mrs. Seymour, of Woburn, Bedfordshire. It seems to be rather shy of flowering, or otherwise to require particular management to flower it well. The present plant had been stunted, and had lost a great part of its leaves, which we believe to be the reason of its flowering so freely, as in Mr. Colvill's collection there is a very large plant, and other smaller ones, which are growing very luxuriantly, but show no signs of flowering. We suspect that they should be kept quite dry through the winter, which would make them lose their leaves and set for bloom. In spring, as soon as the blossom-bud appears, they should be regularly supplied with water, or they may be apt to blight. The best soil to make it thrive is a mixture of turfy loam, peat, and sand, the same as recommended for the other succulent kinds. Cuttings root freely planted in the same kind of soil and set on a shelf in the greenhouse.

In our enumeration of the genera belonging to Geraniaceæ, we mentioned it as our opinion that the present plant would form a distinct genus. In that we are now satisfied, and think it as nearly related to *Erodium* as to *Pelargonium*, but quite distinct from both. It is a native of St. Helena, and has been introduced into this country ever since the year 1765.





PELARGONIUM Barnardianum.

Mr. Barnard's Stork's-bill.

P. Barnardianum, umbellis plurifloris, foliis tripartitis glaucescentibus glabris; segmentis lateralibus bilobis: terminalibus trilobis dentatis, tubo nectarifero calyce duplo longiori.

Stem shrubby with few branches; *branches* flexuose, a little swollen at the joints, smooth and glaucous. *Leaves* 3-parted, acute, smooth, a little glaucous, with a few hairs scattered on the nerves: lower segments 2-lobed, unequally and deeply toothed, upper one 3-lobed, also deeply and sharply toothed. *Petioles* very slender, slightly flattened on the upper side and rounded on the lower, thinly covered with short pellucid hairs. *Stipules* straight and rigid, lanceolate, acute. *Peduncles* smooth and shining, cylindrical, several-flowered. *Involucre* of from 4 to 8 lanceolate acute bractes. *Pedicles* a little bent, smooth and shining. *Calyx* 5-cleft, segments unequal, lanceolate, acute. *Nectariferous tube* more than twice the length of the calyx, flattened and furrowed on each side, thinly covered with short pellucid hairs. *Petals* 5, of a red salmon colour, the two upper ones oblong and marked at the base with branched purple stripes, lower ones ligulate. *Filaments* 10, united at the base, 7 bearing anthers, which are always imperfect. *Style* very hairy. *Stigmas* 5, red and reflexed.

This curious plant is of hybrid origin, and was raised by Edward Barnard, Esq. from the seed of *P. grandiflorum* mixed with the pollen of *P. fulgidum*. It is as near as possible intermediate between the two: the habit of the plant is chiefly that of the former.

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The leaves are intermediate, and so are the flowers. We believe its anthers are always imperfect; they have been so in all the specimens that we have examined. We have named it in compliment to the gentleman who raised it, and to whose liberality our collections are indebted for numerous new and rare species of plants that have been raised from the seeds obtained by him from New Holland and other parts, and kindly distributed to the collections of this country.

Our drawing was taken from a plant in the collection of Robert H. Jenkinson, Esq. who received it from Mr. Barnard. It thrives well in a mixture of turfy loam, peat, and sand; and cuttings strike root readily, if planted in pots and placed on a shelf in the greenhouse.

This curious plant is of hybrid origin, and was raised by Edward Barnard, Esq. from the seed of *P. grandiflorum* mixed with the pollen of *P. vulgatum*. It is as near as possible intermediate between the two: the habit of the plant is chiefly that of the former.



PELARGONIUM candidum.

Fair-flowered Stork's-bill.

P. candidum, umbellis plurifloris, foliis superioribus cordatis trilobis inæqualiter obtuse dentatis pilosis canescentibus, pedunculis calycibusque villosissimis, stipulis cordatis, tubo nectarifero calycis longitudine.

Pelargonium candidum. Hoare MSS.

Stem shrubby, branching; *branches* thickly clothed with soft villous unequal hairs. *Leaves* on the upper part of the stem cordate, 3-lobed, unequally and bluntly toothed with short rigid teeth, thickly clothed on both sides with soft villous hairs which give them a hoary appearance. *Petioles* widely flattened on the upper side and convex on the lower. *Stipules* short, cordate, bluntish, sometimes toothed, mucronate. *Peduncles* cylindrical, several-flowered, thickly clothed with soft villous unequal hairs, as are the bractes, calyx, and nectariferous tube. *Involucre* of about 6 bractes joined at the base; these are ovate, concave, and taper-pointed. *Pedicles* unequal in length, villous. *Calyx* 5-cleft, segments unequal, widely lanceolate, acute, spreading. *Nectariferous tube* about the length of the calyx, flattened on each side and gibbous at the base. *Petals* 5, roundly obovate, the 2 uppermost widest, oblique at the base, of a light blush colour with a bright reddish purple spot in the centre and a few lines below it and branching from it, lower ones nearly white. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Style* flesh-coloured, slightly hairy at the base and

quite smooth upwards. *Stigmas* 5, reddish and revolute.

Our drawing was taken from a fine flowering specimen communicated to us by Sir R. C. Hoare, from his magnificent and extensive collection. We believe it to be a mule production, but it is quite impossible to trace its origin. It is a very pretty plant and an abundant bloomer, and will thrive well in a mixture of turfy loam and peat, or any light vegetable mould; and cuttings soon strike root planted under hand-glasses, or in pots placed in a shady situation.

Pelargonium candidum Hoare MSS.

Stem shrubby, branching; branches thickly clothed with soft villous unequal hairs. Leaves on the upper part of the stem cordate, 3-lobed, unequally and bluntly toothed with short rigid teeth, thickly clothed on both sides with soft villous hairs which give them a hoary appearance. Petioles widely flattened on the upper side and convex on the lower. Stipules short, cordate, bluish, sometimes toothed, mucronate. Bracts cylindrical, several-flowered, thickly clothed with soft villous unequal hairs, as are the bristles, etc. and nectariferous tube. involucres of about 6 bracts joined at the base; these are ovate, concave, and taper-pointed. Pappus unequal in length, villous. Calyx 5-lobed, segments unequal, widely lanceolate, acute, spreading. Nectariferous tube about the length of the calyx, flattened on each side and gibbous at the base. Petals 5, roundly obovate, the 2 uppermost widest, oblique at the base, of a light bluish colour with a bright reddish purple spot in the centre and a few lines below it and branching from it, lower ones nearly white. Filaments 10, united at the base, 7 bearing anthers. Pollen orange-coloured. Style flesh-coloured, slightly hairy at the base and





PELARGONIUM floccosum.

Nappy Stork's-bill.

P. floccosum, pedunculis paucifloris, foliis cordatis tripartitis undulatis utrinque villosopilosis: segmentis sublobatis grosseque obtuse dentatis, stipulis lanceolatis acutis, tubo nectarifero brevissimo calyce triplo breviori.

Jenkinson's Rebecca. *Hortulanorum.*

Stem shrubby, erect, not much branched; *branches* thickly clothed with long villous hairs, as are the *petioles*, *peduncles*, and *calyx*. *Leaves* cordate, 3-parted, undulate, thickly covered on both sides with soft downy hairs, and deeply toothed with blunt rounded teeth; lower segments often 2-lobed, upper one scarcely lobed but bluntly rounded: upper leaves not so blunt and less divided. *Petioles* flattened and furrowed on the upper side and convex on the lower. *Stipules* lanceolate, taper-pointed, villous, and fringed. *Peduncles* cylindrical, 2 to 4 flowered. *Involucre* of 4 unequal ovate or lanceolate keeled villous bractes. *Calyx* 5-cleft, segments reflexed, upper one ovate, acute, keeled, the others widely lanceolate. *Nectariferous tube* very short and blunt, widely flattened on each side, about three times shorter than the calyx. *Corolla* of 5 petals, the two upper ones roundly obovate, of a velvety scarlet, with a dark velvet spot in the centre, and many short dark lines below it which branch in various directions: lower ones narrowly oblong, blunt, of rather a lighter colour. *Filaments* 10, united at the base, 7 bearing anthers, which in our specimens were all sterile. *Style* purple, hairy on the lower part and smooth upwards. *Stigmas* 5, purple, reflexed.

This brilliant-flowered plant is of hybrid origin, and was raised in the collection of Robert H. Jenkinson, Esq. from the seed of *P. ignescens* that had been fertilized with the pollen of *P. princeps*. In brilliancy of colour we think it surpasses all that we have yet seen, being of a fine velvety tint, which cannot be equalled by artificial colouring. Its flowers are not so large as some of the other kinds, but it continues to bloom the greater part of the summer. The best soil to grow it in is an equal portion of turfy loam, peat, and sand, watering it only when quite dry, as it is impatient of moisture. Cuttings root readily if planted in pots in the same kind of soil, and placed on a shelf in the greenhouse.

Jenkinson's Hebeceae. Hortulanorum.

Stems shrubby, erect, not much branched; branches thickly clothed with long villous hairs, as are the petioles, peduncles, and calyx. Leaves cordate, 3-parted, undulate, thickly covered on both sides with soft downy hairs, and deeply toothed with blunt rounded teeth; lower segments often 2-lobed, upper one scarcely lobed but bluntly rounded; upper leaves not so blunt and less divided. Petioles flattened and furrowed on the upper side and convex on the lower. Sepals lanceolate, taper-pointed, villous, and fringed. Peduncles cylindrical, 2 to 4 flowered. Anthers of 4 unequal ovate or lanceolate keeled villous bracts. Calyx 5-lobed, segments reflexed, upper one ovate, acute, keeled, the others widely lanceolate. Westw. & Crawf. take very short and blunt, widely flattened on each side, about three times shorter than the calyx. Corolla of 5 petals, the two upper ones broadly ovate, of a velvety scarlet, with a dark velvet spot in the centre, and many short dark lines below it which branch in various directions; lower ones narrowly oblong, blunt, of a lighter colour. Anthers 10, united at the base, 7 bearing anthers, which in our specimens were all sterile. Style purple, hairy on the lower part and smooth upwards. Stigma 2, purple, reflexed.



E. D. Smith. del.

Pub. by J. Ridgway 17, O. Piccadilly Sep. 1. 1822.

J. Walter. sc.

PELARGONIUM Watsoni.

Watson's Stork's-bill.

P. Watsoni, umbellis plurifloris paniculatis, foliis cordatis rotundatis sublobatis dentato-crenatis margine undulatis, stipulis cordatis acutis subdentatis, tubo nectarifero calyce reflexo subæquali.

Pelargonium Watsoni. *Link. enum. plant. hort. ber. v. 2. p. 192.*

Pelargonium serotinum. *Colv. catal. p. 22. col. 1.*

Stem shrubby, erect, much branched; *branches* erect, rigid, thickly clothed with unequal spreading hairs. *Leaves* wider than long, roundly cordate; slightly 5-lobed, unequally toothed with numerous short sharp teeth, covered on both sides with short hairs, very soft to the touch, margins much waved. *Petioles* about the length of the leaf, widely flattened and furrowed on the upper side and convex on the lower, thickly covered with unequal spreading hairs, as are the peduncles and calyx. *Stipules* very short, cordate, acute, sometimes toothed, fringed. *Peduncles* panicled, 4 to 6 flowered. *Involucre* of 6 widely lanceolate, acute, fringed bractes. *Pedicles* unequal in length, seldom as long as the calyx. *Calyx* 5-cleft, segments unequal, lanceolate, acute, reflexed or revolute. *Nectariferous tube* about the length of the calyx, much flattened and furrowed on each side, of a brown colour like the calyx. *Petals* 5, of a bright lilac, the two upper ones nearly round, very oblique at the base, reflexed from about the middle, and marked with a dark purple spot in the centre, below which are several purple lines that are slightly branched: lower petals

obovate. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Style* purple, hairy below, and smooth upwards. *Stigmas* 5, purple, reflexed.

We suspect the present plant to be a hybrid production, but it is quite impossible to trace its origin with any certainty. It is most likely to have descended from *P. cucullatum* mixed with one of the smaller species. We recollect having seen it in the collections about London for several years past; and before the modern splendid kinds became so numerous, which have of late been raised from seeds, this was esteemed as one of the leading sorts. It is certainly a very pretty plant, and an abundant bloomer; and continues in flower till late in autumn, after most of the others of the same section are overblown: this induced us to name it *P. serotinum* in Messrs. Colvill's catalogue; but as it has been already published by Professor Link in the work above referred to, we willingly adopt his name. It is a very hardy greenhouse plant, and thrives well in a mixture of loam and peat, or any light vegetable mould; and cuttings root freely if placed in a shady situation.



The plant is a shrubby perennial, the leaves
 clustered with long petioles, and the flowers
 large and showy. The leaves are deeply
 serrated, and the flowers are large and
 showy.

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C. D. Smith, del.

Pub. by J. Ridgway 170 Piccadilly Sep. 1. 1822.

J. Wallis sc.

PELARGONIUM Youngii.

Young's Stork's-bill.

P. Youngii, umbellis quadrifloris, foliis cordatis subtrilobis planis inæqualiter dentatis multinerviis utrinque hirsutis; margine undulatis, calycibus reflexis, tubo nectarifero longitudine calycis.

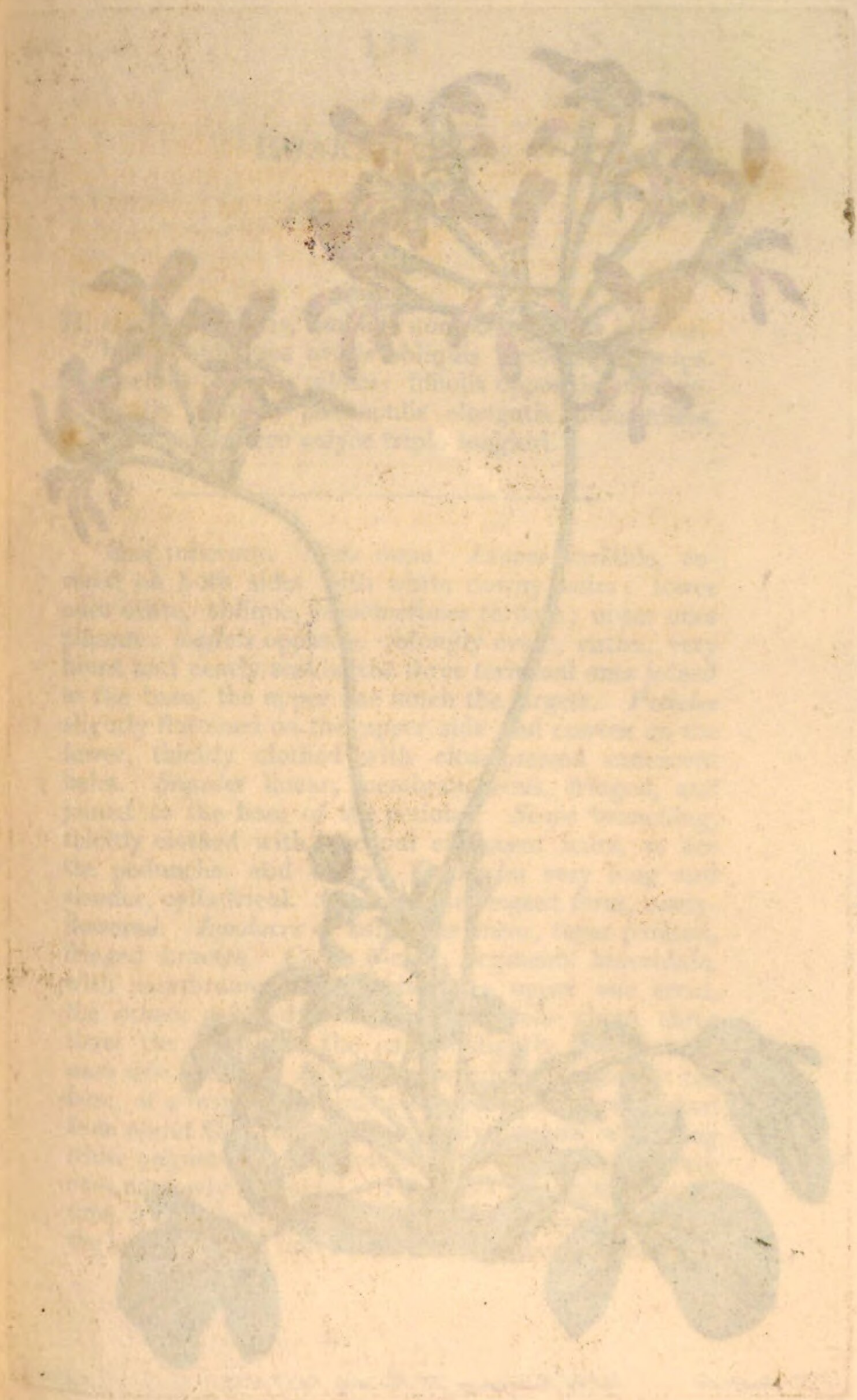
Stem shrubby, much branched; *branches* thickly clothed with long spreading unequal villous hairs. *Leaves* flat, widely cordate, slightly 3-lobed, sharply but unequally toothed, many-nerved, very hairy on both sides, margins undulate. *Petioles* flattened and furrowed on the upper side and convex on the lower, thickly covered with long villous hairs, as are the peduncles and calyx. *Stipules* cordate, taper-pointed and villous. *Peduncles* cylindrical, generally 4-flowered. *Involucre* of 6 widely lanceolate, acute, concave, villous bractes. *Pedicles* unequal in length, longer than the nectariferous tube. *Calyx* 5-cleft, segments unequal, lanceolate, acute; the upper one largest, erect; the others reflexed or revolute. *Nectariferous tube* about the length of the calyx, flattened on each side. *Petals* 5, the two upper ones nearly orbicular, with undulated margins, white, with a large velvety spot in the centre on a red ground, slightly striped underneath, lower petals obovate, white. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Style* pale-coloured, very hairy. *Stigmas* 5, reflexed.

Our drawing was taken from a fine plant, communicated to us by Messrs. Charles and James Young, nurserymen at Epsom, who raised it from the seed of *P. Watsoni*, the germen of which had been fertilized

by the pollen of *P. maculatum*. It is a very desirable plant, as it produces abundance of bloom like its parent; and its large clear white flowers with a broad velvety spot in the centre make a pleasing appearance. It also seems to be as hardy as its parent, and requires the same treatment. Cuttings will soon strike root if planted in pots, and placed on a shelf in the greenhouse.

Stems shrubby, much branched; branches thickly clothed with long spreading unequal villous hairs. Leaves flat, widely cordate, slightly 3-lobed, sharply but unequally toothed, many-nerved, very hairy on both sides, margins undulate. Petioles flattened and furrowed on the upper side and convex on the lower, thickly covered with long villous hairs, as are the branches and calyx. Stigmas cordate, taper-pointed and villous. Pistil cylindrical, generally 4-flowered. Anthers of 6 widely lanceolate, acute, concave, villous bristles. Petioles unequal in length, longer than the nectariferous tube. Calyx 5-lobed, segments unequal, lanceolate, acute; the upper one largest, erect; the others reflexed or revolute. Nectariferous tube about the length of the calyx, flattened on each side. Petals 6, the two upper ones nearly orbicular, with undulated margins, white, with a large velvety spot in the centre on a red ground, slightly striped underneath. Lower petals obovate, white. Filaments 10, united at the base, 7 bearing anthers. Yellow orange-coloured. Style pale-coloured, very hairy. Stigmas 5, reflexed.

Our drawing was taken from a fine plant, communicated to us by Messrs. Charles and James Young, nurserymen at Epsom, who raised it from the seed of *P. Watsoni*, the germin of which had been fertilized





HOAREA elegans.

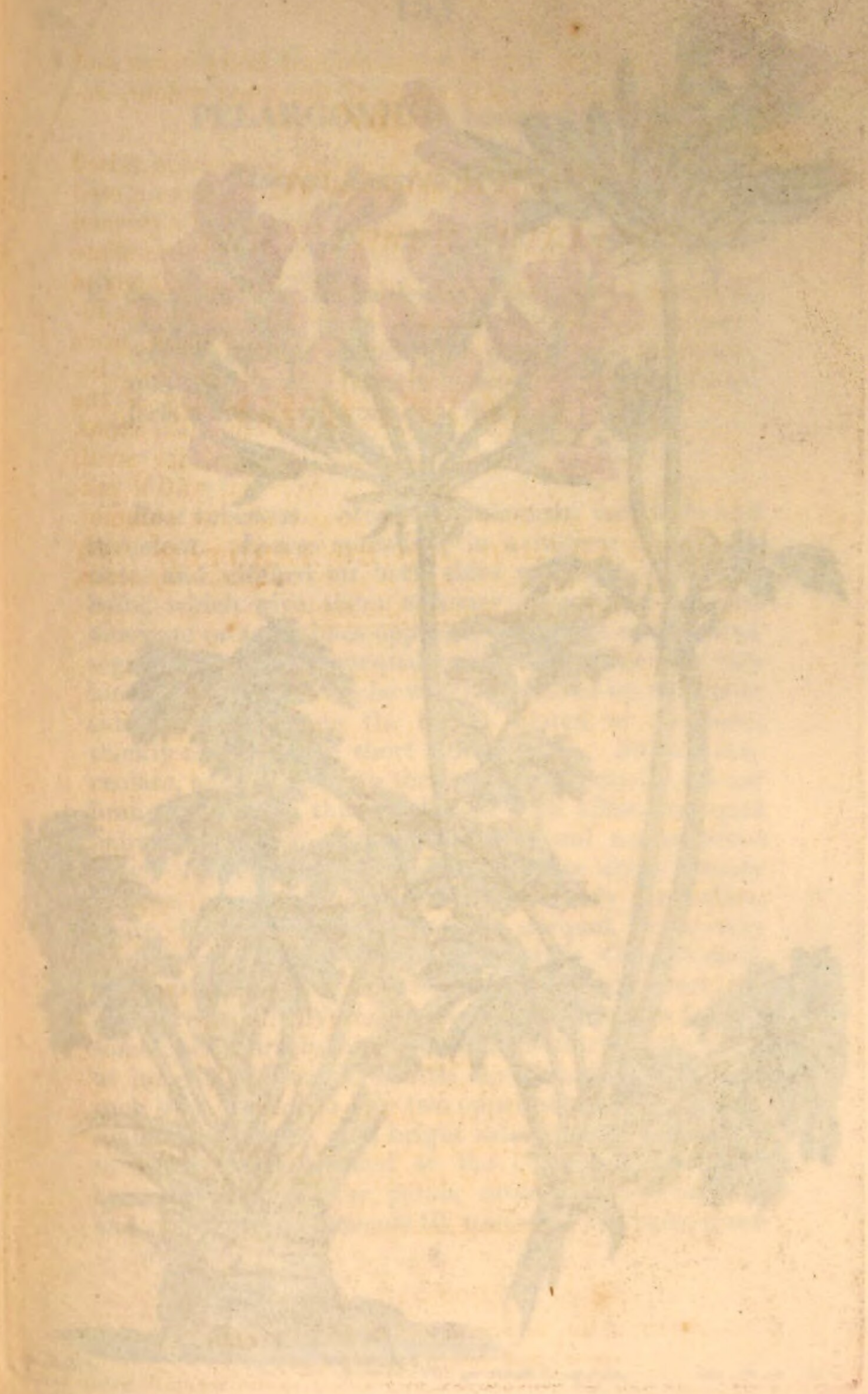
Elegant Hoarea.

H. elegans, acaulis, umbella composita, foliis inferioribus simplicibus ovatis obliquis ternatisque; superioribus pinnatis pilosis: foliolis oppositis oblongo-ovatis obtusis, pedunculis elongatis filiformibus, tubo nectarifero calyce triplo longiori.

Root tuberous. *Stem* none. *Leaves* variable, covered on both sides with white downy hairs; lower ones ovate, oblique, or sometimes ternate; upper ones pinnate: *leaflets* opposite, oblongly ovate, entire, very blunt and nearly sessile, the three terminal ones joined at the base, the upper one much the largest. *Petioles* slightly flattened on the upper side and convex on the lower, thickly clothed with close-pressed canescent hairs. *Stipules* linear, membranaceous, fringed, and joined to the base of the petioles. *Scape* branching, thickly clothed with unequal canescent hairs, as are the peduncles and calyx. *Peduncles* very long and slender, cylindrical. *Umbels* of an elegant form, many-flowered. *Involucre* of numerous linear, taper-pointed, fringed bractes. *Calyx* 5-cleft, segments lanceolate, with membranaceous margins, the upper one erect, the others reflexed. *Nectariferous tube* about three times the length of the calyx, slightly flattened on each side, sessile. *Petals* 5, spreading, distinct at the base, of a bright crimson, the two upper ones reflexed from about the middle, spatulately ligulate, with long white unguis that are spotted on the upper part; lower ones narrowly spatulate. *Filaments* 10, united into a tube, 5 only bearing anthers, the upper one about half the length of the lower ones; sterile ones subulate and

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curved inwards. *Style* flesh-coloured, hairy below and smooth upwards. *Stigmas* 5, of the same colour, reflexed.

This elegant little plant is a mule production raised last year at the Nursery of Messrs. Colvill, from a seed of *Dimacria pinnata* produced by the seed of a germen fertilized by *Hoarea atra*, and it is nearly intermediate between them. Nothing can exceed it in brilliancy of colour and elegance of growth; and we think this interesting tribe will now become more fashionable, since their colours are so much improved by culture: besides, they grow and flower as freely as any of the shrubby kinds, if treated according to our directions. We think them particularly well adapted for small greenhouses, as they take but little room, and if managed well will continue to flower all the summer. They will all thrive in an equal mixture of turfy loam, peat, and sand; and may be increased by seeds, or by the little tubers from the roots.





E. D. Smith. del.

Pub. by J. Ridgway 170 Piccadilly Oct. 1. 1822.

J. Walter. sc.

PELARGONIUM hoareæflorum.

Hoarea-flowered Stork's-bill.

P. hoareæflorum, subcaulescens, umbellis multifloris, scapo ramoso, foliis pinnatis pilosis canescentibus: foliolis alternis oppositisque pinnatifidis laciniatisque: segmentis cuneatis inciso-dentatis, petalis inferis concavis subconniventibus.

Root tuberous. *Stem* subcaulescent, very leafy and succulent. *Leaves* spreading in a radiate form, pinnate, and clothed on both sides with soft canescent hairs, which give them a hoary appearance: *leaflets* alternate or sometimes opposite, pinnatifid or laciniate, segments cuneate, unequally and deeply cut and very bluntly toothed. *Petioles* widely flattened on the upper side and convex on the lower, dilated at the base, thickly clothed with short villous hairs. *Stipules* lanceolate, acute, joined to the base of the petioles. *Scape* branching, leafy, thickly clothed with villous unequal hairs, as are the peduncles, calyx, and nectariferous tube. *Umbels* many-flowered, in some above twenty flowers. *Involucre* of numerous narrowly lanceolate, acute, fringed bractes. *Pedicles* unequal, some very long and slender, others short and stiff. *Calyx* 5-cleft, segments lanceolate, unequal; the upper one erect, the others reflexed. *Nectariferous tube* unequal in length, sometimes scarcely longer, at others nearly three times as long as the calyx, a little curved and flattened on each side. *Petals* 5, the two uppermost largest, widely spatulate, reflexed, of a bright salmon-colour inclining to scarlet, and marked at the base with numerous branched lines, lower petals rather lighter, shorter, and spatulate. *Filaments* 10, united at the base, seven

bearing anthers, which are always imperfect. *Style* quite smooth, flesh-coloured. *Stigmas* 5, of the same colour, reflexed.

This curious and handsome plant is a hybrid production, and is intermediate between *P. fulgidum* and *Hoarea nutans*. It is one of the mules that was raised last year from seed by Mr. Smith, at the Earl of Liverpool's, Coombe Wood, where our drawing was made this spring. It appears to be a very free grower and easily managed, and it has continued to flower in succession all the summer. Like the rest of the tuberous-rooted species, it will thrive best in a mixture of turfy loam, peat, and sand, watering it only when in a growing or flowering state, and keeping it quite dry when dormant. It may be readily increased by the little tubers from the root, which must be planted in pots in the same kind of soil, with their tops just above the ground that they may not rot. They require no water until the wound is dried up, and then but sparingly. As soon as they begin to grow freely, they may be transplanted into small pots and watered regularly when dry.



E. D. Smith. del.

Det. by J. Ridgway 170 Fecashilly Oct. 1. 1822.

J. Watts. sc.

PELARGONIUM pulcherrimum.

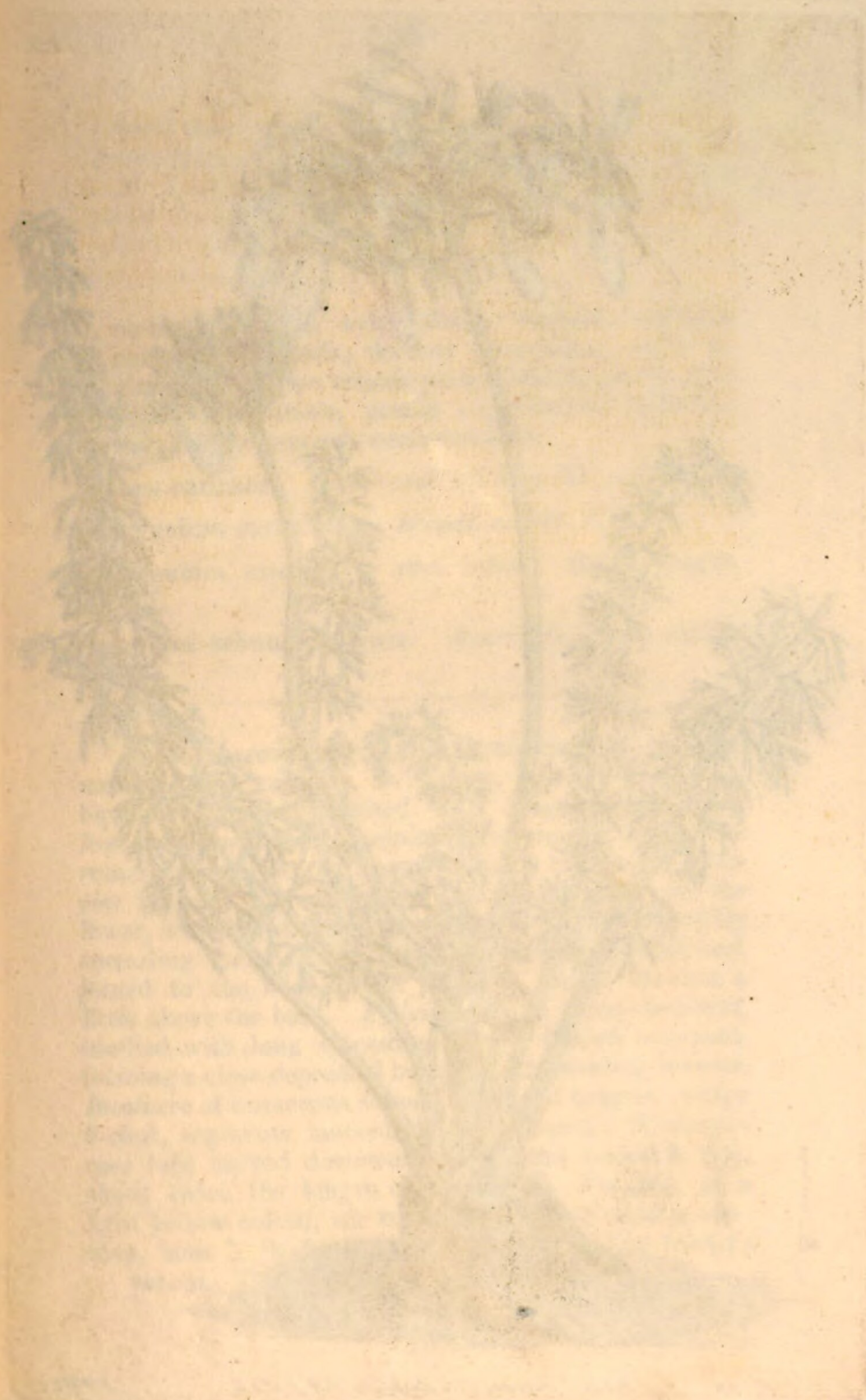
Beautiful Stork's-bill.

P. pulcherrimum, pedunculis plurifloris, foliis reniformibus planis obsolete lobatis margine undulatis inæqualiter dentatis basi truncatis, caule erecto ramosissimo, tubo nectarifero longitudine calycis.

Stem shrubby, erect, very much branched; *branches* short, erect, thickly clothed with soft white unequal hairs. *Leaves* kidney-shaped, nearly twice as wide as long, truncate at the base, margins undulate, sharply and unequally toothed, covered on both sides with very short hairs; nerves numerous, much branched. *Petioles* slender, longer than the leaves, flattened and furrowed on the upper side and convex on the lower, thickly clothed with soft white hairs, as are the peduncles and calyx. *Stipules* lanceolate, acute, slightly fringed. *Peduncles* cylindrical, several-flowered. *Involucre* of 6 short ovate bluntish bractes, ending abruptly in a short acute point. *Pedicles* slender, longer than the nectariferous tube. *Calyx* 5-cleft, segments unequal, lanceolate, acute, concave. *Nectariferous tube* about the length of the calyx, flattened on each side and gibbous at the base. *Petals* 5, the two upper ones much the widest, roundly obovate, very unequal at the base, of a bright pink colour stained with red, with a large dark velvety spot in the centre, and numerous dark lines of the same colour which branch in all directions; lower petals spatulately obovate, of a bright rose-colour, stained in the centre and faintly marked with several lines. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-

coloured. *Germen* villous. *Style* red, hairy at the base and smooth upwards. *Stigmas* 5, red, reflexed.

Our drawing of this plant was taken at the Nursery of Messrs. Colvill, where it has been cultivated for some time. We have not ascertained its origin, but suspect it to be a hybrid production. It makes a pleasing variety from its handsome marked flowers: it also keeps dwarf and bushy, which may be considered an advantage, as there are so many strong-growing sorts. It does not begin flowering in spring so soon as some others, but it makes up for that in continuing to flower till late in autumn. A mixture of turfy loam and peat, or any light vegetable mould, will suit it very well, and cuttings soon strike root if planted in a sheltered situation.





HOAREA carinata.***Boat-flowered Hoarea.***

H. carinata, acaulis, scapo diviso, umbellis capitatis congestis depressis, floribus nutantibus, foliis bipinnatis hirsutis: foliolis pinnatifido-laciniatis multifidis subdentatis, petalis superioribus refractis; inferioribus concavis conniventibus.

Hoarea carinata. *Colv. catal. ed. 2. p. 21. col. 3.*

Pelargonium carinatum. *Wendl. collect. c. ic.*

Pelargonium rapaceum: *var. lutea.* *Botan. magaz. 1877.*

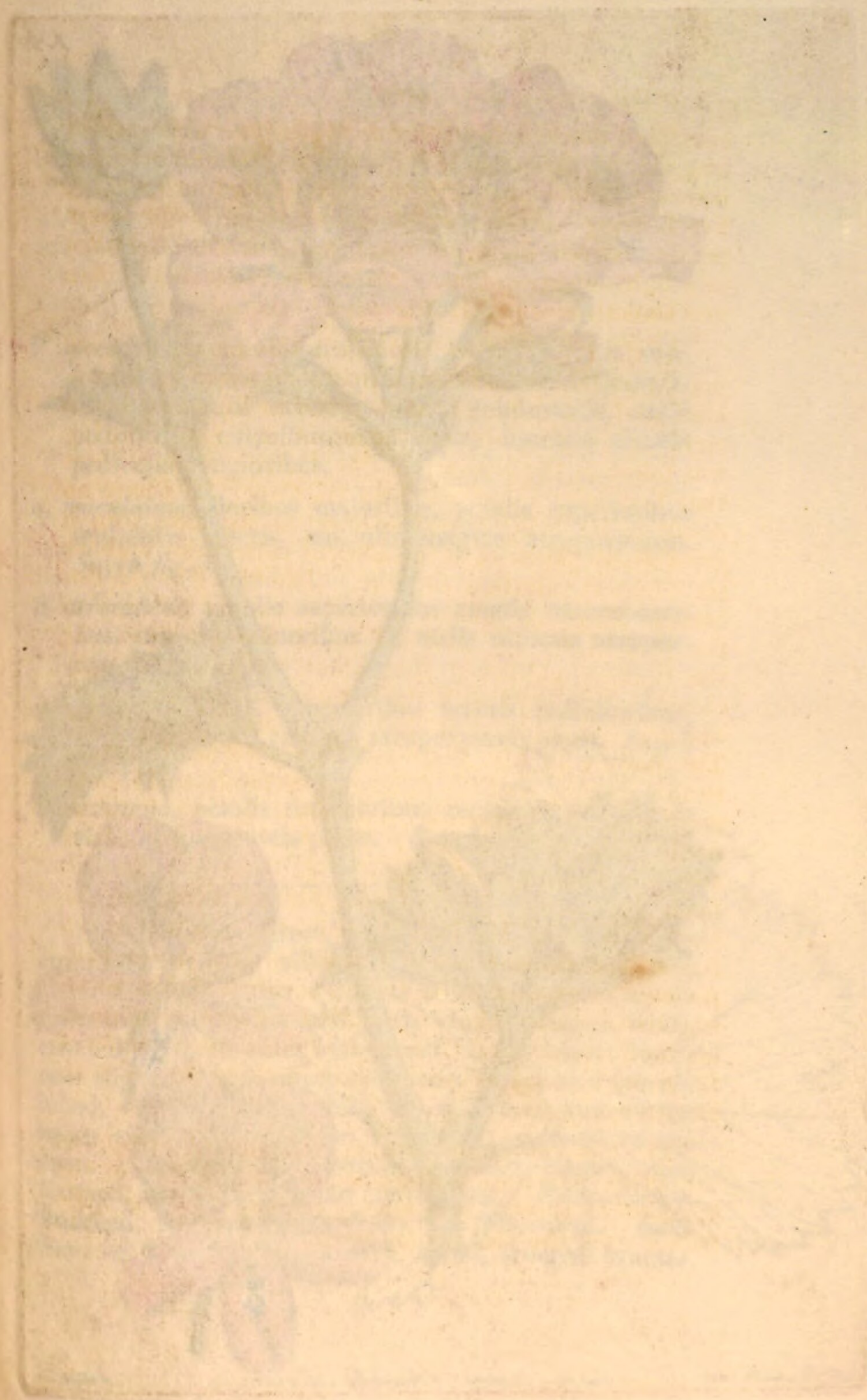
Geranium selinum, flavum. *Andrews's geran. exclus. foliis.*

Root tuberous, carrot-like, branching out into numerous other tubers. *Stem* none. *Leaves* very long, bipinnate, thickly clothed with long woolly hairs: *leaflets* pinnatifid or laciniate; segments divided or sometimes simple, entire or toothed, bluntish. *Petioles* flattened on the upper side and convex on the lower, widened at the base, thickly clothed with woolly spreading hairs. *Stipules* lanceolate, taper-pointed, joined to the base of the petioles. *Scape* divided a little above the base. *Peduncles* long, many-flowered, clothed with long spreading hairs. *Umbels* compact, forming a close depressed head with its nodding flowers. *Involucre* of numerous subulate, fringed bractes. *Calyx* 5-cleft, segments lanceolate, all reflexed. *Nectariferous tube* curved downwards, flattened on each side, about twice the length of the calyx. *Petals* 5, of a light yellow colour, the two upper ones spatulate, concave, bent back from about the middle like rabbit's

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ears, and marked from thence to the base with several irregular purple spots; lower petals shorter and broader, concave, connivent. *Filaments* 10, united into a tube, five bearing anthers, which are enclosed in the lower petals; barren filaments erect and subulate. *Pollen* of a light orange-colour. *Style* pale, hairy at the base and smooth upwards. *Stigmas* 5, reflexed.

At the time that we published this plant, we were not aware that it had been already published by Wendland under a different name; and as his name has a right of priority, we readily adopt it. Our drawing was taken at the Nursery of Mr. Colvill, from a plant that had been imported from the Cape. We have no doubt of its being a real species, as we have seen a great many plants of it in different collections without the slightest variation in them. The figure in the Botanical Magazine above quoted certainly belongs to the present species, and not to *H. corydaliflora*. At the time we published that plant, we were not sufficiently acquainted with the differences between them; but are now satisfied of their being decidedly distinct. The flowers in Mr. Andrews's figure certainly belong to this species, and the foliage as certainly to *H. corydaliflora*: his *Geranium moschatum* is, we have no doubt, intended for our *P. bellulum*; but we believe very few would guess at it from his figure: his *G. oxalioide* we are not sufficiently acquainted with, but believe it to be in Mr. Colvill's collection; it is very different from *G. oxaloides* of Cavanilles: his *G. tenellum, flavum*, we suspect to be *Dimacria astragalifolia* wanting its pinnated leaves; we often see it in that state: his three varieties of *G. astragalifolium* are varieties of *D. pinnata*, and certainly have nothing to do with *D. astragalifolia*.

The present plant requires the same treatment as the other tuberous-rooted species, and is one of the hardiest of them. It is readily increased by the little tubers from the root, or by seeds.





PELARGONIUM spectabile.

Showy Stork's-bill.

P. spectabile, umbellis multifloris, foliis cordatis sublobatis undulatis inæqualiter grosseque dentatis rigidis, stipulis cordatis acutis subdentatis, caule pedunculis calycibusque villosis, bracteis ciliatis pedicellis longioribus.

α . *maculatum*, floribus majoribus, petalis superioribus undulatis erectis, maculis magnis atropurpureis. *Suprà fig. 1.*

β . *atrorubens*, petalis superioribus erectis atrorubentibus, maculis minoribus et striis ramosis atropurpureis pictis.

γ . *striatum*, petalis superioribus erectis pallidioribus, striis numerosis ramosis atropurpureis pictis. *Suprà fig. 2.*

δ . *recurvum*, petalis superioribus recurvis, maculis et striis atropurpureis pictis. *Suprà fig. 3.*

Stem shrubby, erect, branching; *branches* thickly covered with long villous hairs, as are the petioles, peduncles, and calyx. *Leaves* cordate, undulate, rigidly and deeply toothed with sharp unequal teeth, covered on both sides with short downy hairs; lower ones slightly lobed, upper ones more deeply and sharply lobed. *Petioles* widely flattened and furrowed on the upper side and convex on the lower, widened at the apex. *Stipules* widely cordate, undulate, fringed, often toothed and ending in an acute point. *Peduncles* cylindrical, bent upwards, from 6 to 8-flowered. *Involucre* of 6 to 8 ovate, keeled, acute, fringed bractes,

which are generally longer than the pedicles. *Calyx* 5-cleft, segments widely lanceolate, acute, the upper one largest, erect, the others spreading. *Nectariferous tube* unequal in length, in some longer in others not so long as the calyx, flattened and furrowed on each side, thickly clothed with long villous hairs. *Petals* 5, the two uppermost roundly ovate, oblique at the base, lower ones oblong or widely ligulate; all of different shades of red, according to their variety, and the upper petals marked with spots and stripes as described under each. *Filaments* 10, united at the base, 7 bearing anthers. *Germen* and *aristæ* villous. *Style* red, slightly hairy at the base and smooth upwards. *Stigmas* 5, purple, reflexed.

All these splendid varieties of *P. spectabile* were raised last year at the Nursery of Messrs. Colvill, where our drawing was taken in July last. They were all produced from the seeds of different varieties of *P. cucullatum* that had been fertilized with the pollen of *P. ignescens*. Some of the varieties have also been raised in the collection of Robert H. Jenkinson, Esq. They are all very desirable plants, but *α. maculatum* is certainly the finest. They appear to be the hardiest of the tribe that have yet been raised, and of the largest and strongest growth: some of the plants were from three to four feet high the second year from seeds, and their stems very strong and stout. They require the same kind of treatment as all the others that are related to *P. ignescens*. A mixture of turfy loam, peat, and sand, is the best compost for them, watering them only when quite dry. Cuttings will soon strike root if planted in pots in the same kind of soil, and set on a shelf in the greenhouse.



ERODIUM multicaule.

Many-branched Heron's-bill.

E. multicaule, pedunculis multifloris, foliis ternato-pinnatifidis: segmentis oblongis acutis inciso-serratis, petalis acutis calyce longioribus, caule ramossissimo adscendente.

Erodium multicaule. Fischer MSS. Nobis in Whitley's catalogue, p. 31. col. 1. Link enum. 2. p. 184.

Root perennial. *Stems* much branched, ascending, thickly clothed with short white unequal reflexed hairs. *Leaves* ternate or pinnatifid, hairy on each side, of a dark green colour: *leaflets* sessile, oblong, acute, lower ones deeply cut and sharply toothed, middle one pinnatifid, sharply and unequally cut and toothed. *Petioles* shorter than the leaf, flattened on the upper side and convex on the lower, thickly covered with short unequal hairs, as are the peduncles, pedicles, and calyx. *Stipules* lanceolate, taper-pointed, membranaceous. *Peduncles* many-flowered. *Involucre* of several short lanceolate taper-pointed membranaceous bractes. *Pedicles* unequal in length, the upper ones longest, upright when in flower, afterwards declining. *Calyx* of 5 sepals, which are unequal, oblong, many-nerved, and terminated with a rigid bluntish arista, that is nearly as long as the sepal. *Sepals* all reflexed. *Petals* 5, of a bright blue purple, elliptic, acute, the two upper ones rather widest, all fringed at the base. *Filaments* 10, united at the base, 5 bearing anthers. *Style* none. *Stigmas* 5, sessile, purple, reflexed.

Our drawing of this plant was taken at the Nursery of Messrs. Whitley, Brames, and Milne, at Fulham,

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where it was raised from seed that had been received from Dr. Fischer of Moscow, under the name that we have adopted. We believe that the plant described in Link's Enumeratio also belongs to the same species. It is a handsome hardy perennial plant, and flowers nearly all the summer and till late in autumn; but it requires a good deal of room, as its branches spread round in all directions. The colour of the flowers is very brilliant, and one to which no colouring of the artist can do justice. We suppose it to be a native of Siberia; but its natural abode is not stated by Link. It thrives well in the open flower-border in the common garden soil, and may be increased by cuttings planted early in summer either in pots or under hand-glasses: it also produces seeds, by which any number may be raised.

Root perennial. Stems much branched, ascending, thickly clothed with short white unequal reflexed hairs. Leaves ternate or pinnatifid, hairy on each side, of a dark green colour: leaflets sessile, oblong, entire, lower ones deeply cut and sharply toothed, middle one pinnatifid, sharply and unequally cut and toothed. Petioles shorter than the leaf, flattened on the upper side and convex on the lower, thickly covered with short unequal hairs, as are the peduncles, pedicels, and calyx. Siliques lanceolate, taper-pointed, membranaceous, peduncles many-flowered. Bractlets of several short lanceolate taper-pointed membranaceous bracts. Siliques unequal in length, the upper ones longest, upright when in flower, afterwards decussate. Color of 5 sepals, which are unequal, oblong, many-nerved, and terminated with a rigid bluntish point, that is nearly as long as the sepal. Stamens all reflexed. Petals 5, of a bright blue purple, elliptic-pointed, the two upper ones rather widest, all fringed at the base. Column 10, united at the base, 5 bearing anthers. Style none. Stigma 5, sessile, deeply reflexed.

Our drawing of this plant was taken at the Nursery of Messrs. W. & A. Smith, and John, at Tottenham.





PELARGONIUM Beaufortianum.

Duchess of Beaufort's Stork's-bill.

P. Beaufortianum, umbellis subquinquefloris, foliis sub-
 quinquelobis dentato-mucronatis basi truncatis :
 floralibus cuneatis, tubo nectarifero calyce duplo
 longiori.

Pelargonium Beaufortianum. Pers. syn. 2. p. 231.

Hort. sub. Lond. p. 152. n. 113.

Geranium Beaufortiae. Andrews's geran. c. ic.

Stem shrubby, erect, branching; *branches* clothed with short unequal pellucid hairs, as are the petioles, peduncles, and calyx. *Leaves* rigid, smoothish, more or less lobed, lower ones truncate at the base, 5-lobed, sharply and very unequally toothed, many-nerved, and clothed on both sides with short transparent hairs; upper ones cuneate, entire or rarely toothed, mucronate. *Petioles* flattened and furrowed on the upper side and convex on the lower, a little widened at the base. *Stipules* cordately lanceolate, taper-pointed and fringed. *Peduncles* cylindrical, a little swollen upwards, 3 to 5-flowered. *Involucre* of 5 or 6 widely lanceolate, acute, fringed bractes. *Pedicles* about three times the length of the bractes, bent upwards. *Calyx* 5-cleft, upper segment largest, acute, erect, the others lanceolate, reflexed. *Nectariferous tube* widely flattened and furrowed on each side, about twice the length of the calyx. *Petals* 5, the two upper ones roundly obovate, oblique at the base, of a bright lilac, marked with numerous red and purple lines, which branch in various directions; lower petals obovate, of rather a lighter colour. *Filaments* 10, united at the

base, 7 bearing anthers. *Style* purple, very long, hairy at the base and smooth upwards. *Stigmas* 5, purple, reflexed.

We suspect this plant to be a hybrid production, probably between *P. acerifolium* and *P. lanceolatum*. It has been long in the collections about London, where it has generally been taken for a real species. It is now becoming rather scarce through the rage for novelty, and we were afraid that it had quite disappeared till we saw it in the collection of Robert H. Jenkinson, Esq. where our drawing was taken. It is a pretty flowering plant and more hardy than *P. principissæ*. It thrives well in a mixture of turfy loam, peat, and sand, or any other rich light soil; and cuttings root freely if planted in pots and placed in a sheltered situation.



Stem erect, branched, with a glaucous green colour, thickly clothed with minute, appressed, linear-lanceolate, slightly bearded, serrated and very short hairs. Leaves ovate, deeply lobed, serrated, with a prominent venation; of which the lower part is more deeply lobed and serrated. The upper part is more ovate and less lobed. The leaves are 7 to 8 lines long, and 4 to 5 lines broad. The flowers are large, with a deep purple or blue colour. The calyx is blunt, and flattened at the tip. The corolla is slightly clavate, tubular, 5-lobed, the lobes white, of a dark blue colour, with a very deep spot in the centre, and a very numerous line of the same colour at the base of the lower petals. The filaments are 15, situated in the base of the corolla. The anthers are small, and the style is very short, with a small stigma.



PELARGONIUM principissæ.

Princess Charlotte's Stork's-bill.

P. principissæ, umbellis plurifloris, foliis cordato-reniformibus sublobatis inæqualiter mucronato-dentatis, stipulis acuminatis, petalis rotundato-obovatis imbricatis reflexis, tubo nectarifero brevissimo calyce triplo breviori.

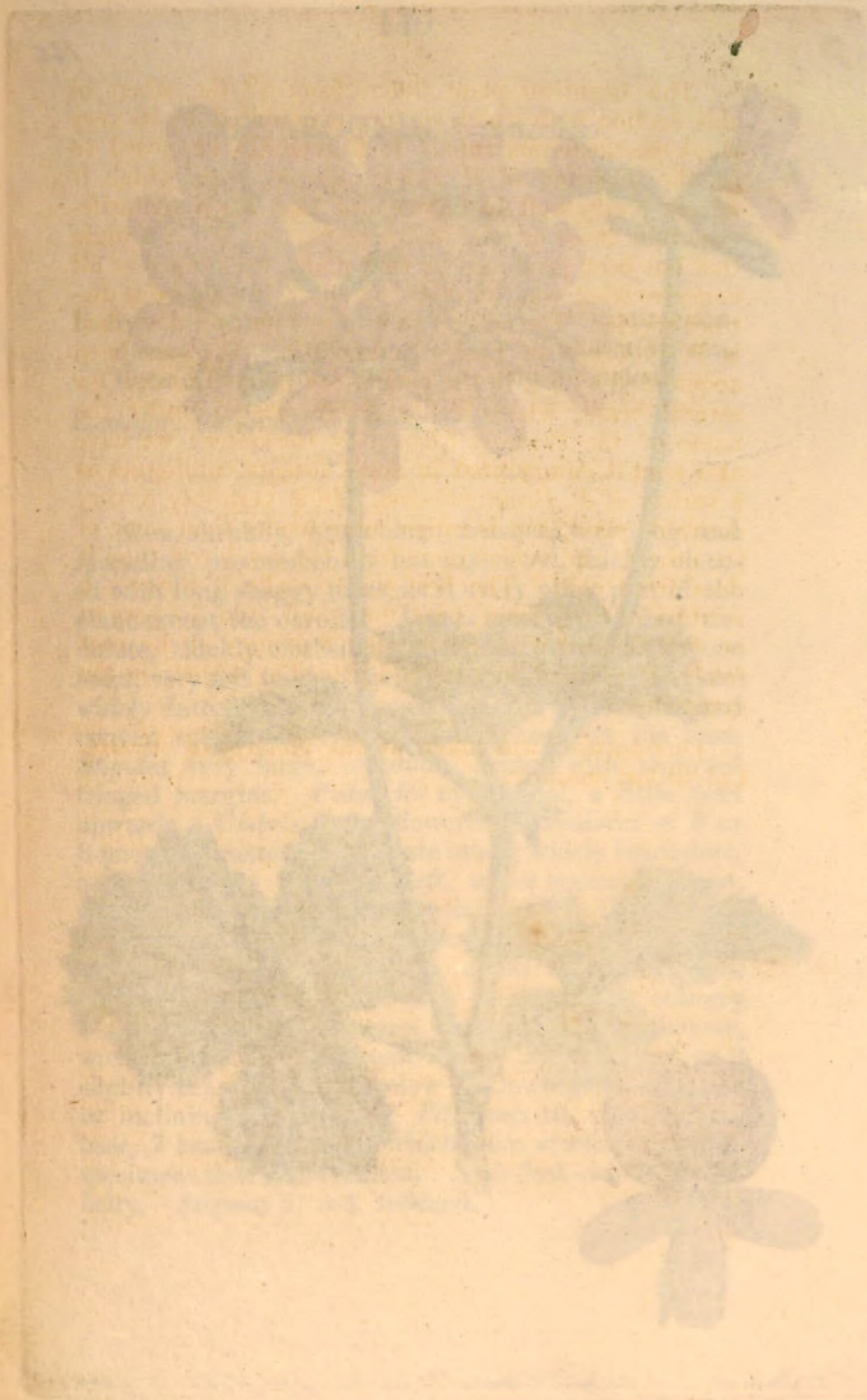
Pelargonium princeps. *Nob. in Colv. Catal. p. 22. col. 1.*

Stem shrubby, erect, branching; *branches* erect, of a shining green colour, thickly clothed with soft white unequal horizontal hairs. *Leaves* cordately reniform, slightly lobed, unequally and deeply toothed, with sharp-pointed teeth; of a dark green colour and hairy on both sides. *Petioles* about the length of the leaf, hairy. *Stipules* narrowly lanceolate, fringed, and taper-pointed. *Peduncles* several-flowered, hairy, as are the bractes, pedicles, and calyx. *Involucre* of 6 or 7 bractes: *bractes* lanceolate, keeled, ciliate, with very sharp points. *Pedicles* long and slender, bent upwards, about twice the length of the calyx. *Calyx* 5-cleft, segments unequal, lanceolate, erect. *Nectariferous tube* very short, about three times shorter than the calyx, blunt, and flattened on each side. *Petals* 5, roundly obovate, imbricate, reflexed, the two uppermost widest, of a dark lilac colour, with a dark velvety spot in the centre, and from the base branch numerous lines of the same colour in all directions; lower petals of a lighter colour, marked with pale lines. *Filaments* 10, connected at the base, 7 bearing anthers. *Pollen* russet-coloured. *Style* smooth, red. *Stigmas* very short, recurved.

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This beautiful plant differs from all the others of this section with which we are acquainted by its very short nectariferous tube. It is generally supposed to be the offspring of *P. Beaufortianum*, with which it agrees pretty well in habit; but that has a nectariferous tube twice as long as the calyx, and if it is a mule that has been produced by that plant, we cannot at all conceive what was its other parent. It may be a distinct species. The nearest to it of any we find described is *P. gloriosum* of Link's Enumeratio. We have been acquainted with it in the collections about London for several years, where it has always passed under the name of the *Princess Charlotte's Geranium*: we have also seen it enumerated in some foreign catalogues as a variety of *P. Beaufortianum*. It is certainly a very desirable plant, but is rather more tender than some of the others, and suffers more from too much wet than it does from cold. The best soil to make it thrive is a mixture of turfy loam, peat, and sand, and the pots to be well drained with potsherds. Cuttings strike root freely, if planted in pots and placed on a shelf in the greenhouse.

Our drawing was taken at the Nursery of Messrs. Colvill last summer.





PELARGONIUM concolor.

Self-coloured Stork's-bill.

P. concolor, umbellis multifloris, foliis cordatis quinquelobis undulatis mollibus, stipulis cordatis, caulibus diffusis, tubo nectarifero calyce longiori.

β. major, floribus majoribus, fig. b.

Stem shrubby, branching; *branches* very long and spreading, procumbent if not supported, thickly clothed with long shaggy hairs, as is every other part of the plant except the corolla. *Leaves* cordate, 5-lobed, undulate, thickly clothed on both sides with soft villous hairs, very soft to the touch, feeling like cloth. *Petioles* widely flattened and furrowed on the upper side and convex on the lower, a little widened at the base. *Stipules* very large, cordate, acute, with recurved fringed margins. *Peduncles* cylindrical, a little bent upwards. *Umbels* 6 to 8-flowered. *Involucre* of 6 or 8 unequal bractes, some ovate others widely lanceolate, acute, fringed. *Calyx* 5-cleft, upper segment largest, erect, ovate, the others lanceolate, reflexed. *Nectariferous tube* longer than the calyx, flattened on each side and gibbous at the base, about twice the length of the pedicle. *Petals* 5, of a bright red or orangey scarlet, the two upper ones oblong or nearly obovate, with a darker obscure spot in the centre and 2 or 3 slightly branched lines below it; lower petals ligulate or inclining to spatulate. *Filaments* 10, united at the base, 7 bearing anthers, which were sterile in all the specimens that we have seen. *Style* flesh-coloured, very hairy. *Stigmas* 5, red, reflexed.

Several plants of this handsome mule were raised last year from seeds at the Nursery of Messrs. Colvill; and others were also raised in the collection of Robert H. Jenkinson, Esq. None of them varied in the least from each other. They were the produce of the common *P. capitatum* that had been mixed with the pollen of *P. ignescens*. The flower of the larger variety, given at the bottom of the plate, was raised by Mr. Jenkinson from the seed of a larger flowered variety of *P. capitatum* also impregnated by *P. ignescens*. They are both very handsome and abundant flowering plants, and are well adapted for training to a trellis, as their shoots grow to a great length if allowed. They are very abundant bloomers, and continue to flower till late in autumn: they are also as hardy as any of their near relatives, suffering more from too much wet than from any thing besides. A mixture of turfy loam, peat, and sand, suits them very well; and cuttings strike freely if placed in a sheltered situation.





PELARGONIUM eriophyllum.

Woolly round-leaved Stork's-bill.

P. eriophyllum, umbellis plurifloris subpaniculatis, foliis rotundato-cordatis obsolete lobatis obtuse denticulatis planis subtus incanis mollibus, petalis inferis angusto-spatulatis, tubo nectarifero calyce parum longiori.

Pelargonium cordatum β . *tomentosum.* *Hortulanorum.*

Stem shrubby, much branched; *branches* spreading, thickly clothed with soft villous hairs, as is every other part of the plant except the corolla. *Leaves* flat, very soft, roundly cordate, scarcely lobed, toothed with short rounded teeth that terminate in a hard callous point; upper side of a dark green, but thickly covered with short white hairs, which give it a blueish appearance; underneath clothed with a close white tomentum, margins fringed. *Petioles* unequal in length, but generally longer than the leaf, flattened and furrowed on the upper side and convex on the lower, a little widened at the base. *Stipules* cordate, taper-pointed, whitish, membranaceous with fringed margins. *Peduncles* generally panicled, reaching much beyond the leaves, producing umbels of from 4 to 6 flowers. *Involucre* of 6 or 7 lanceolate keeled bractes. *Pedicles* very unequal in length, some very short, others as long as the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, the upper ones widest, erect, the others reflexed. *Nectariferous tube* about the length or a little longer than the calyx. *Petals* 5, the two uppermost obliquely ovate, of a lilac colour, with a dark crimson mark in the centre, which joins several reddish purple lines from the base: lower petals narrowly spatulate, of a

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light blush colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* of a dark orange colour. *Germen* villous. *Style* pale purple, hairy on the lower part and smooth on the upper. *Stigmas* 5, purple, reflexed.

We have no doubt but this plant is of hybrid origin, and one of its parents is certainly *P. cordatum*, but the other is not so easily determined. The flowers which it produces in spring are very small, and their anthers always imperfect: but as the season advances, the flowers increase in size and colour, so that in autumn they are very pretty, and of the size represented in our figure, in which the anthers are all perfect. It also bears an abundance of bloom, which continues to expand in succession all the summer. It may be ranked amongst those of middle stature, not near so strong a grower as *P. cordatum*. A mixture of turfy loam and peat, or any rich vegetable mould, will suit it very well; and it is as hardy as any of the genus. Cuttings soon strike root if placed in a sheltered situation.

Our drawing was taken from a fine plant in the magnificent collection of Robert H. Jenkinson, Esq. where it was known by the name of *P. cordatum* β . *tomentosum*.



DIMACRIA bipartita.*Forked-leaved Dimacria.*

D. bipartita, acaulis, umbella composita, foliis pinnatis pilosis: foliolis oppositis verticillatisque oblongo-lanceolatis bipartitis integrisque, petalis superioribus refractis basi maculatis, tubo nectarifero recurvo calyce duplo longiori.

Root tuberous. *Stem* none. *Leaves* spreading, pinnate, hairy on both sides, of a light green colour: *leaflets* opposite or in whorls, oblong or lanceolate, bluntish, some entire, others forked but not toothed. *Petioles* slender, slightly flattened on the upper side and rounded on the lower, thickly clothed with soft woolly hairs, as are the peduncles, calyx, and nectariferous tube. *Stipules* subulately linear, joined to the base of the petioles. *Peduncles* long and slender, bearing umbels of many flowers, which spread in a radiate form. *Involucre* of numerous subulate fringed bractes. *Calyx* 5-cleft, segments lanceolate, acute, concave, all reflexed. *Nectariferous tube* more than double the length of the calyx, flattened and slightly furrowed on each side and curved downwards. *Petals* 5, pale cream-coloured, the two uppermost spatulate, connivent at the base, with spreading points, from about the middle reflexed, and below that are numerous unequal purple spots and lines: lower petals ligulate, spreading. *Filaments* 10, united at the base, 5 only bearing anthers, the two lower ones much longer than the others. *Style* red, quite smooth. *Stigmas* 5, reflexed.

This neat little plant is a hybrid production, and was raised last year at the Nursery of Mr. Colvill, from

a seed of *Dimacria pinnata* that had been fertilized by the pollen of *Hoarea corydaliflora*. In habit and character it partakes in nearly an equal degree of both. It appears to be of free growth and an abundant bloomer, as it has flowered in succession the greater part of the summer. It also produces seeds, if care be taken to fertilize the stigma when in bloom. The best soil for it is an equal portion of turfy loam, peat, and sand, the same as recommended for the other tuberous-rooted or succulent-stemmed plants of this natural order. It also requires a period of rest after it has done flowering, during which time it requires no water. It may be increased by the little tubers of the roots, or by seeds.

Root tuberous. Stem none. Leaves spreading, pinnate, hairy on both sides, of a light green colour; leaflets opposite or in whorls, oblong or lanceolate, bluntish, some entire, others forked but not toothed. Petioles slender, slightly flattened on the upper side and rounded on the lower, thickly clothed with soft woolly hairs, as are the peduncles, calyx, and nectary-tube. Sepals tubularly joined to the base of the petals. Petals long and slender, bearing umbels of many flowers, which spread in a flat form. Anthers of numerous subulate fringed bracts. Ovary 2-lobed, subglobose, pedicel acute, concave, all reflexed. Nectary-tube more than double the length of the calyx, flattened and slightly furrowed on each side and curved downwards. Petals 5, pale cream-coloured, the two in front spatulate, connivent at the base, with spreading points, from about the middle reflexed, and below that are narrow, from narrow points and lines; lower petals larger late spreading. Stamens 10, united at the base, 5 only broadly anther, the two lower ones much longer than the others. Style red, quite smooth. Ovary 5-lobed.

This neat little plant is a hybrid production and was raised last year at the nursery of Mr. Colville, near



CICONIUM reticulatum.*Netted-veined Ciconium.*

C. reticulatum, umbellis multifloris, foliis cordato-reniformibus obsolete quinquelobis crenatis zonatis reticulato-venosis, stipulis cordatis, petalis cuneatis, tribus inferioribus duplo majoribus.

Stem shrubby, branching a little; *branches* spreading, thickly clothed with unequal villous hairs. *Leaves* cordately reniform, obsoletely 5-lobed, crenate, strongly marked with a zone, particularly on the young leaves, reticulately veined with pale yellow veins and thickly clothed on both sides with soft villous hairs. *Petioles* flattened and furrowed on the upper side and convex on the lower, a little swollen at the base, thickly covered with soft villous hairs, as are the peduncles, calyx, and nectariferous tube. *Stipules* widely cordate, acute, reticulately veined like the leaves, margins fringed. *Peduncles* very long, axillary or opposite to the leaf, bearing a many-flowered umbel. *Involucre* of numerous unequal bractes, some widely cordate, others ovate or lanceolate, acute, fringed. *Calyx* 5-cleft, segments widely lanceolate, acute, the upper one erect, the others reflexed. *Nectariferous tube* nearly three times as long as the calyx, flattened on each side and swollen at the base, nearly sessile. *Petals* 5, cuneate, of a bright orangy scarlet, the three lower ones double the size of the upper ones, distinct at the base and widely spreading, upper ones imbricate at the base with spreading points. *Filaments* 10, straight, united at the base, 7 bearing anthers, the two upper ones very short. *Pollen* orange-coloured. *Style* smooth, pale red. *Stigmas* 5, reflexed.

The specimen of this plant, from which our drawing was taken, was kindly communicated to us by Miss Newsham from Wetheby Cottage, near Sidmouth, Devon, who informs us that she raised it from the seed of the common *Horse-shoe Geranium*, and that cuttings from the plant always continue true like their parent. We have no doubt but the plant is of hybrid origin, and suppose one of its parents to be *C. Fothergillii*, and the other to be one of the variegated-leaved varieties of *C. zonale*. It is a very singular and ornamental plant, its leaves being elegantly reticulated with pale yellow veins, and often marked with a dark circle, which gives it a pleasing appearance; the flowers are also very pretty, but not so fine as those of *C. Fothergillii*. It is a very free-growing plant, and will thrive well in any rich light soil, or a mixture of turfy loam and peat will suit it very well. Cuttings strike root readily, if planted in pots and placed on a shelf in the greenhouse.

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PELARGONIUM Newshamianum.

Miss Newsham's Stork's-bill.

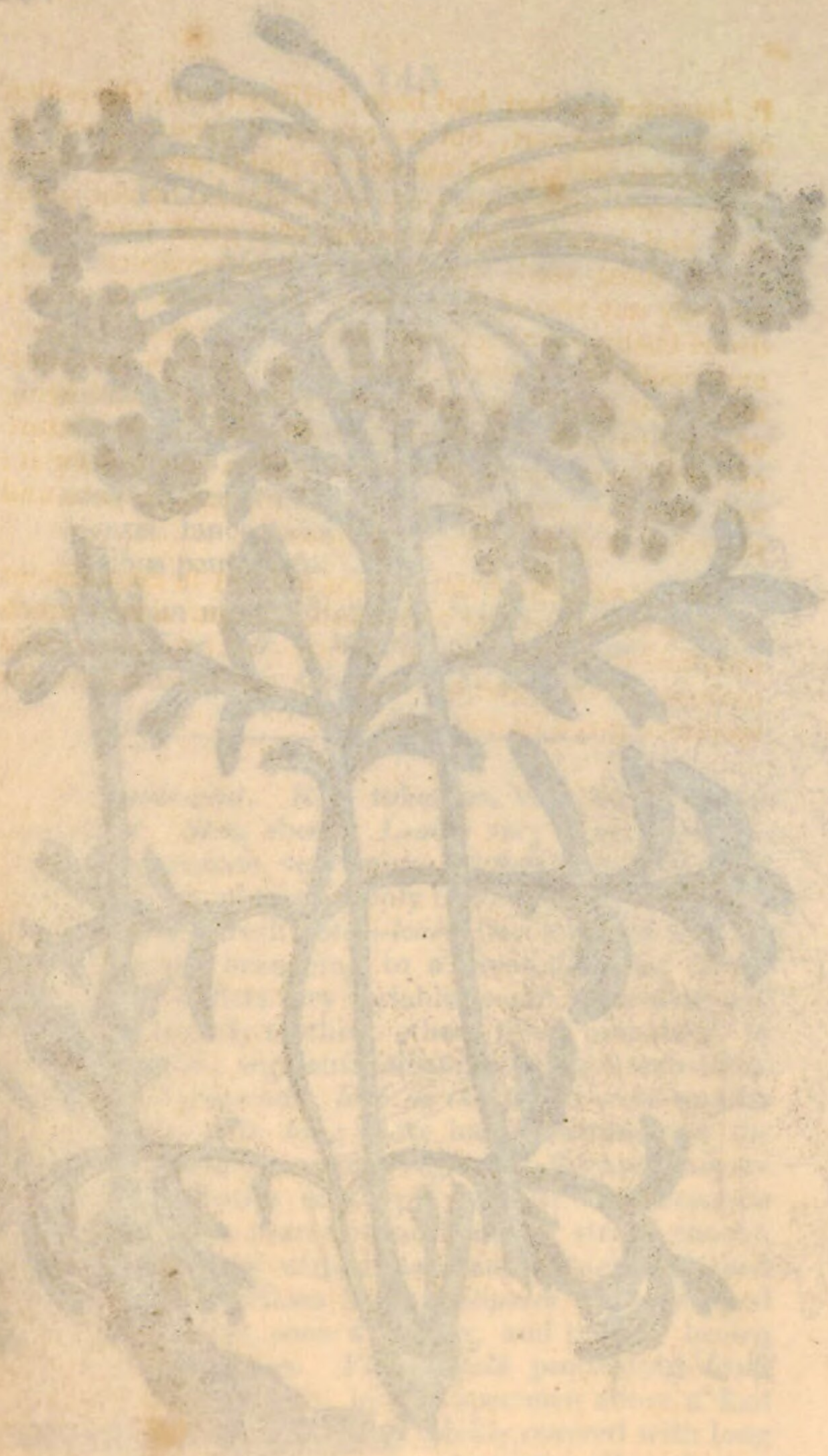
P. Newshamianum, pedunculis 2-3-florisve, foliis cordatis trilobis inæqualiter grosseque dentatis, stipulis cordatis acutis subdentatis, calycibus reflexis, tubo nectarifero calyce sesquolongiori.

Stem shrubby, branching; *branches* erect, thickly clothed with long soft white spreading unequal hairs. *Leaves* cordate, 3-lobed, unequally and deeply toothed with sharp rigid teeth, roughish to the touch and hairy on both sides: *lobes* spreading, acute. *Petioles* slender, a little flattened on the upper side and convex on the lower, thickly clothed with soft spreading hairs, as are the peduncles, calyx, and nectariferous tube. *Stipules* cordate, mucronate, generally toothed and ciliate. *Peduncles* cylindrical, 2 or 3 flowered. *Involucre* of about six cordately ovate, acuminate bractes. *Pedicels* unequal in length, bent upwards. *Calyx* 5-cleft, segments long, lanceolate, acute, points reflexed or revolute. *Nectariferous tube* about half as long again as the calyx, flattened and slightly furrowed on each side, a little gibbous at the base. *Petals* 5, the two uppermost widely obovate, slightly recurved, oblique at the base, of a light blush, with a dark purple spot in the centre, which joins several purple confluent lines from the base that are slightly branched, 3 lower ones narrowly obovate, of a light blush. *Filaments* 10, united at the base, 7 bearing anthers. *Germen* villous. *Style* red, hairy below and smooth on the upper part. *Stigmas* 5, purple, reflexed.

This pretty little plant is of hybrid origin, and was raised at the Nursery of Mr. Colvill, from the seed of

P. lanceolatum that had been fertilized with the pollen of some other sort, but we cannot at present guess at the species, as a great number of plants were all raised at the same time from seeds all produced by one plant that had been set by the pollen of a great number of sorts: these seeds produced a heterogeneous mass, scarcely any two of them alike. The present is a pretty dwarf bushy-growing plant, and an abundant bloomer, and continues flowering the greater part of the summer: it is also as hardy as any of the genus, and being of small growth, it requires but little room. A mixture of turfy loam, peat, and sand, is the best soil for it; and cuttings soon strike root, if planted in pots and placed on a shelf in the greenhouse.

We have named the present subject in compliment to Miss Newsham, of Sidmouth, Devon, a lady much attached to the science of Botany, and an admirer of curious plants; and to whom we are indebted for the specimen given in our last plate.





PELARGONIUM multiradiatum.

Many-rayed Stork's-bill.

P. multiradiatum, subcaulescens, umbellis 20-30-florisve, foliis inferioribus pinnatis hirsutis; foliolis pinnatifidis; segmentis oblongis obtusis inciso-dentatis: superioribus decompositis glabriusculis; segmentis lanceolatis obtusis integerrimis incisive, floribus pentandris.

Pelargonium multiradiatum. Spreng. Nov. prov. hort. ac. Hal. et Ber. Wendl. coll. cum icone. Dietr. Nachtr. 6. 61. Link enum. 2. p. 191.

Subcaulescent. Root tuberous, very large, brown and scaly. Stem short. Leaves very large, variable; lower ones pinnate, very hairy; leaflets pinnatifid; segments oblong, obtuse, deeply incised and toothed with blunt rounded teeth: stem-leaves decompose with revolute points, branching to a great distance, nerves very hairy, leaflets very variable, some lanceolate and entire or slightly toothed, others bifid, pinnatifid, or deeply divided; segments falcate, blunt and smoothish, inclining to glaucous; leaf on the flower-stalk smaller and pinnate, with long white hairs scattered on the midrib; leaflets pinnatifid, segments falcate, lanceolate, obtuse, entire or deeply toothed with revolute points. Petioles nearly cylindrical, not strong enough to support the leaf without assistance, thickly clothed with long white villous hairs. Stipules kidney-shaped or widely cordate, soon withering, and turning brown and membranaceous. Flower-stalk proceeding from the crown of the plant, in our specimen above a foot and half high, glaucous, and thickly covered with long villous hairs. Peduncles 3, glaucous, all springing

from the same joint, and flowering in succession, each producing an umbel of twenty-four flowers. *Involucre* of numerous lanceolate bluntish bractes, tipped with long hairs. *Pedicles* in the lower flowers scarcely any, in the upper ones very long and thickly clothed with long white hairs. *Calyx* 5-cleft, smooth, segments widely lanceolate, obtuse, revolute. *Petals* 5, nearly equal, roundly obovate, of a dark brown or nearly black, edged with a greenish yellow. *Filaments* 10, united at the base, 5 only bearing anthers; of these the four lower ones are longest and subulate, the upper one widened and spatulate, bent in at the point and reflexed so as almost to hide the anther: the barren ones are all shorter and bent at the points, the two upper ones standing out from the others nearly as in *Campylia*. *Pollen* pale yellow. *Germen* villous. *Style* green, hairy on the lower part and smooth on the upper. *Stigmas* 5, of a black colour, spreading.

Our drawing of this very distinct and curious species was taken at the Nursery of Mr. Colvill, who received several roots of it from the Cape, with many other curious species. It differs so much from all the others with which we are acquainted, that it might with propriety be formed into a distinct genus, being intermediate between our *Section Monospatalla* and the genus *Campylia*. We suspect that *P. sanguineum*, which at the time we published it we believed to be a real species, will prove to be a mule between the present plant and *P. fulgidum*; but this is mere surmise.

The leaves of the present species remind us of a large Fern or of *Chærophyllum temulum*; the uncoloured one in our plate is only a diminished outline. It thrives well in a mixture of turfy loam, peat, and sand, and propagates freely from the tubers of the roots.

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THE HISTORY OF THE
CITY OF LONDON
FROM THE FOUNDATION
TO THE PRESENT TIME

By JOHN STOW.
The first Edition.
Printed by I. I. for I. B. at the
North-Door of St. Dunstons Church
in Fleet-Street.

1618.

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1633.

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E. D. Smith. del.

Pub. by J. Angstrom 170. Piccadilly Jan. 1. 1825.

J. Watts. sc.

PELARGONIUM Brownii.

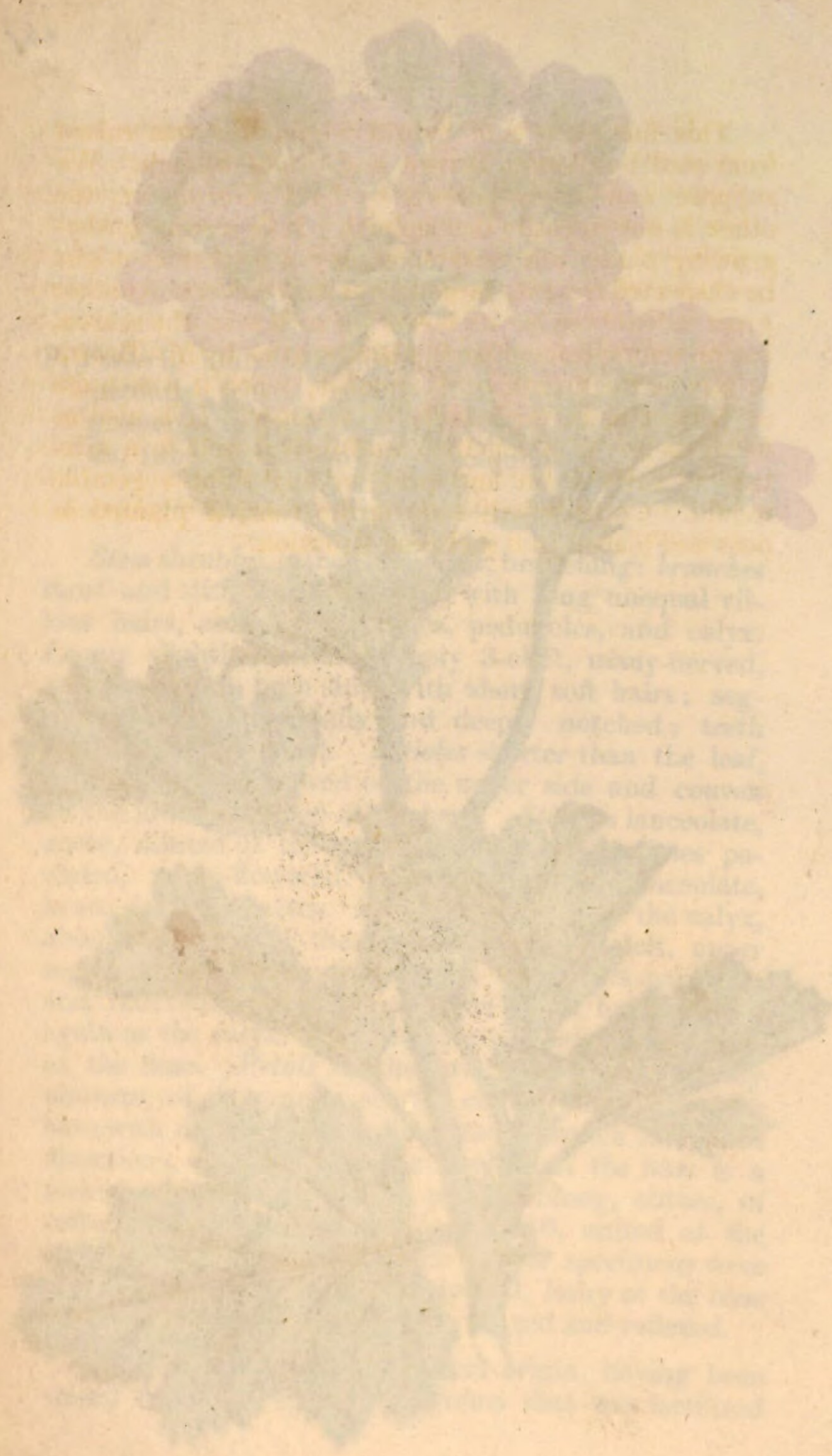
Brown's Stork's-bill.

P. Brownii, umbellis plurifloris, foliis subquinelobis acutis argute inæqualiter dentatis rigidis multinerviis basi cuneatis, petalis omnibus obovatis, tubo nectarifero calyce parum breviori.

Brown's Miss Rosa. *Hortulanorum.*

Stem shrubby, short and stiff, branching; *branches* short, erect, thickly clothed with long spreading villous hairs, as is every other part of the plant except the corolla. *Leaves* rigid, acute, concave, strongly and numerously nerved: lower ones 5-lobed; upper ones 3-lobed: those near the flowers not lobed, all sharply toothed with rigid unequal teeth. *Petioles* short, widely flattened on the upper side and convex on the lower, scarcely as long as the leaf. *Stipules* lanceolate, acuminate, fringed. *Peduncles* short and stiff. *Umbels* several-flowered. *Involucre* of about six oblong or ovate, concave, keeled, acute bractes. *Pedicles* about the length of the bractes. *Calyx* 5-cleft, segments erect, lanceolate, pointed. *Nectariferous tube* scarcely as long as the calyx, flattened on each side and gibbous at the base. *Petals* 5, the two upper ones widely obovate, oblique at the base, of a fine blush-colour with a large dark spot in the centre which stains a great part of the petals: lower ones narrowly obovate or oblong, of a bright blush. *Filaments* 10, connected at the base, 7 bearing anthers. *Pollen* orange-coloured. *Style* purple, slightly hairy on the lower part and quite smooth upwards. *Stigmas* 5, purple, reflexed.

This fine plant is of hybrid origin, and was raised from seed by Messrs. Brown and Co. of Slough. We suppose one of its parents to be *P. Gardneriæ*, the other is not so easily determined. It is a snug bushy-growing plant, not near so strong a grower as might be suspected from its large leaves and flowers. Another great advantage is, its flowering so late in the season, the present specimen having been sent us by Mr. Brown so late as the month of November, when it was quite as perfect as in the middle of summer. It is also as hardy as any of the genus, and thrives well in a mixture of turfy loam and peat, or any light vegetable mould. Cuttings will soon strike root, if planted in pots and placed in a sheltered situation.





E. D. Smith. del.

Tab. by J. Ridgway 170 Piccadilly Jan. 1. 1823.

J. Watts. sc.

PELARGONIUM *Potteri*.

Potter's Stork's-bill.

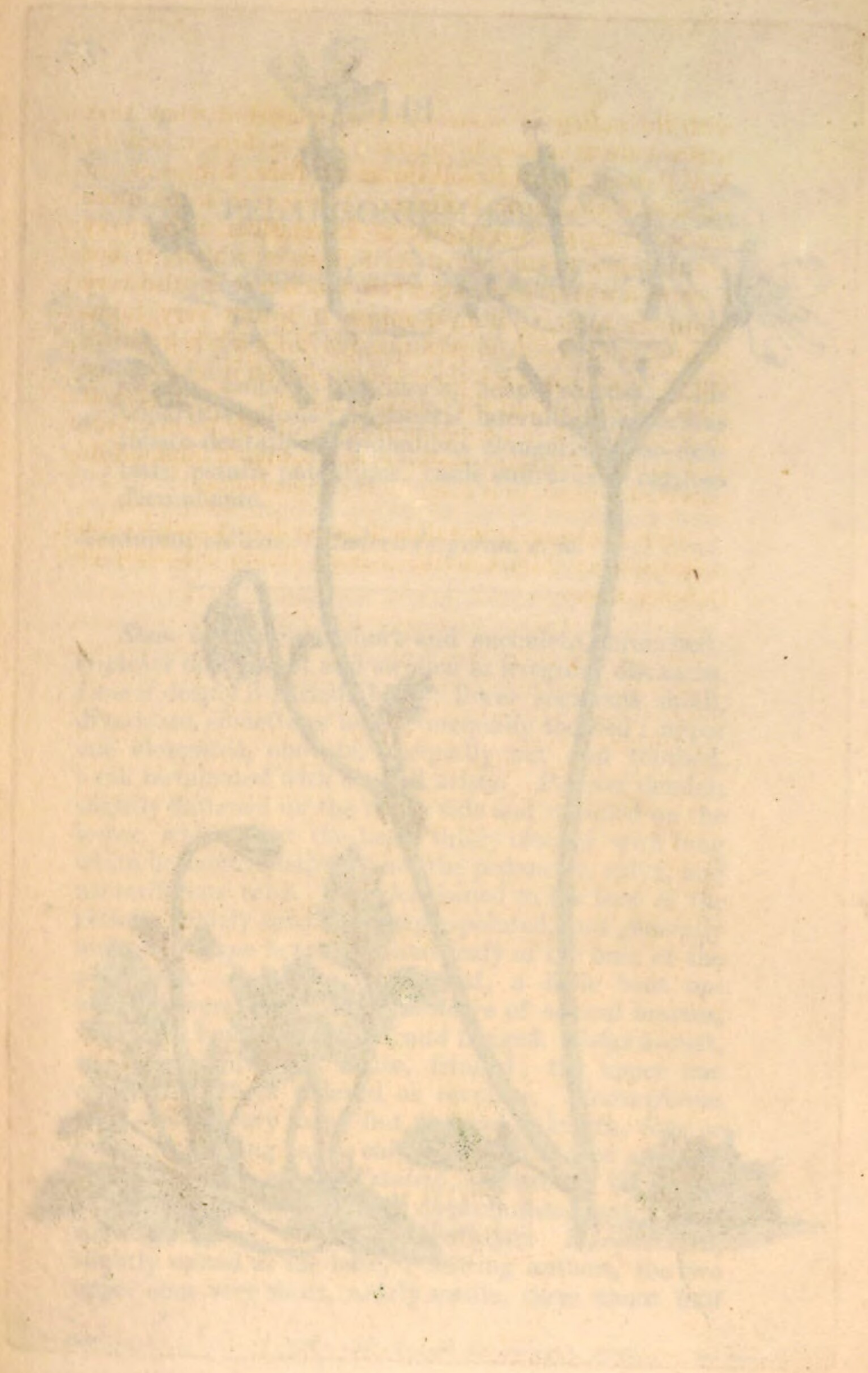
P. Potteri, umbellis multifloris subpaniculatis, foliis cordatis trifidis multinerviis: segmentis lobatis grosseque crenato-dentatis, stipulis lanceolatis acutis, tubo nectarifero calyce sesquilongiori.

Stem shrubby, rather succulent, branching: *branches* short and stiff, thickly clothed with long unequal villous hairs, as are the petioles, peduncles, and calyx. *Leaves* slightly cordate, deeply 3-cleft, many-nerved, and covered on both sides with short soft hairs; segments lobed, unequally and deeply notched; teeth bluntish and rounded. *Petioles* shorter than the leaf, flattened and furrowed on the upper side and convex on the lower, widened at the base. *Stipules* lanceolate, acute, dilated at the base. *Peduncles* sometimes panicled, many-flowered. *Involucre* of six lanceolate, acute, fringed bractes. *Pedicles* shorter than the calyx, about the length of the bractes. *Calyx* 5-cleft, upper segment widely lanceolate, erect, the others narrower and reflexed. *Nectariferous tube* about half as long again as the calyx, flattened on each side and gibbous at the base. *Petals* 5, the two upper ones roundly obovate, of an orangy scarlet colour, marked at the base with numerous dark lines which branch in various directions, and between the lines from the base is a forked white mark: lower petals oblong, obtuse, of rather a lighter colour. *Filaments* 10, united at the base, 7 bearing anthers, which in our specimens were always sterile. *Style* flesh-coloured, hairy at the base and smooth upwards. *Stigmas* 5, red and reflexed.

This pretty plant is of hybrid origin, having been raised from a seed of *P. fulgidum* that was fertilized

with the pollen of some other species, but what that was we are at a loss to guess. It was first raised by Mr. Potter, in the collection of Mrs. Simpson, at Purser's Cross, near Fulham. We find it to be more tender than the generality of its relatives, being very apt to lose a great part of its foliage in winter, if not kept in a warm situation: too much wet is also very injurious to it, but in summer it grows very luxuriantly, and its flowers are much finer when growing out in the open air; these are produced in abundance all the summer and till late in autumn. The best soil to grow it in is an equal portion of turfy loam, peat, and sand. Cuttings strike root readily, if planted in pots and placed on a shelf in the greenhouse.

Our drawing was taken from a fine plant in the collection of Mr. Colvill, King's Road, Chelsea, in October last.





PELARGONIUM pallens.

Cream-coloured Stork's-bill.

P. pallens, umbellis plurifloris, scapo ramoso, foliis tripartitis pilosis; segmentis lateralibus minoribus lobato-dentatis: terminalibus elongatis inciso-dentatis, petalis patentibus, caule suffruticoso carnosio decumbente.

Geranium pallens. *Andrews's geran. c. ic.*

Stem suffruticose, short and succulent, branched: *branches* decumbent and swollen at irregular distances. *Leaves* deeply 3-parted, hairy: lower segments small, divaricate, sometimes lobed, unequally toothed; upper one elongated, obovate, unequally cut and toothed, teeth terminated with a small arista. *Petioles* slender, slightly flattened on the upper side and rounded on the lower, widened at the base, thinly clothed with long white horizontal hairs, as are the peduncles, calyx, and nectariferous tube. *Stipules* joined to the base of the petioles, widely lanceolate, taper-pointed, and generally forked. *Scape* branching and leafy at the base of the peduncles. *Peduncles* cylindrical, a little bent upwards, several-flowered. *Involucre* of several bractes, which are lanceolate, acute, and fringed. *Calyx* 5-cleft, segments lanceolate, acute, fringed; the upper one erect, the others reflexed or revolute. *Nectariferous tube* sessile, very long, but unequal in length, four or five times as long as the calyx, much flattened and furrowed on each side. *Petals* 5, spreading, of a pale cream-colour, the two upper ones obovate, emarginate, slightly reflexed, lower ones spatulate. *Filaments* 10, slightly united at the base, 7 bearing anthers, the two upper ones very short, nearly sessile, three about half



E. D. Smith. del.

Pl. by J. Ridgway 170 Piccadilly Jan. 1. 1823.

J. Watts. sc.

PELARGONIUM Potteri.

Potter's Stork's-bill.

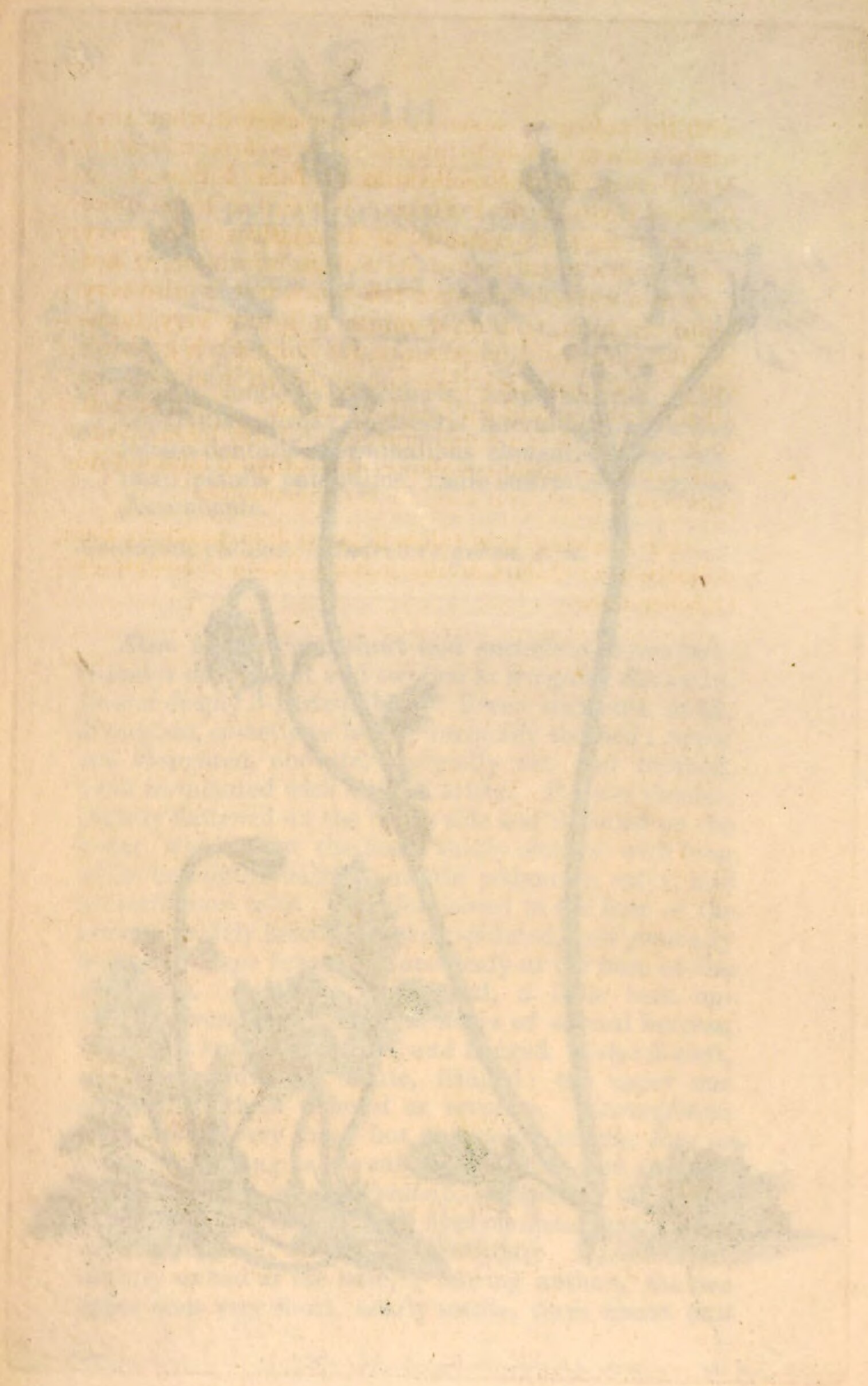
P. Potteri, umbellis multifloris subpaniculatis, foliis cordatis trifidis multinerviis: segmentis lobatis grosseque crenato-dentatis, stipulis lanceolatis acutis, tubo nectarifero calyce sesquolongiori.

Stem shrubby, rather succulent, branching: *branches* short and stiff, thickly clothed with long unequal villous hairs, as are the petioles, peduncles, and calyx. *Leaves* slightly cordate, deeply 3-cleft, many-nerved, and covered on both sides with short soft hairs; segments lobed, unequally and deeply notched; teeth bluntish and rounded. *Petioles* shorter than the leaf, flattened and furrowed on the upper side and convex on the lower, widened at the base. *Stipules* lanceolate, acute, dilated at the base. *Peduncles* sometimes panicled, many-flowered. *Involucre* of six lanceolate, acute, fringed bractes. *Pedicles* shorter than the calyx, about the length of the bractes. *Calyx* 5-cleft, upper segment widely lanceolate, erect, the others narrower and reflexed. *Nectariferous tube* about half as long again as the calyx, flattened on each side and gibbous at the base. *Petals* 5, the two upper ones roundly obovate, of an orangy scarlet colour, marked at the base with numerous dark lines which branch in various directions, and between the lines from the base is a forked white mark: lower petals oblong, obtuse, of rather a lighter colour. *Filaments* 10, united at the base, 7 bearing anthers, which in our specimens were always sterile. *Style* flesh-coloured, hairy at the base and smooth upwards. *Stigmas* 5, red and reflexed.

This pretty plant is of hybrid origin, having been raised from a seed of *P. fulgidum* that was fertilized

with the pollen of some other species, but what that was we are at a loss to guess. It was first raised by Mr. Potter, in the collection of Mrs. Simpson, at Purser's Cross, near Fulham. We find it to be more tender than the generality of its relatives, being very apt to lose a great part of its foliage in winter, if not kept in a warm situation: too much wet is also very injurious to it, but in summer it grows very luxuriantly, and its flowers are much finer when growing out in the open air; these are produced in abundance all the summer and till late in autumn. The best soil to grow it in is an equal portion of turfy loam, peat, and sand. Cuttings strike root readily, if planted in pots and placed on a shelf in the greenhouse.

Our drawing was taken from a fine plant in the collection of Mr. Colvill, King's Road, Chelsea, in October last.





PELARGONIUM pallens.

Cream-coloured Stork's-bill.

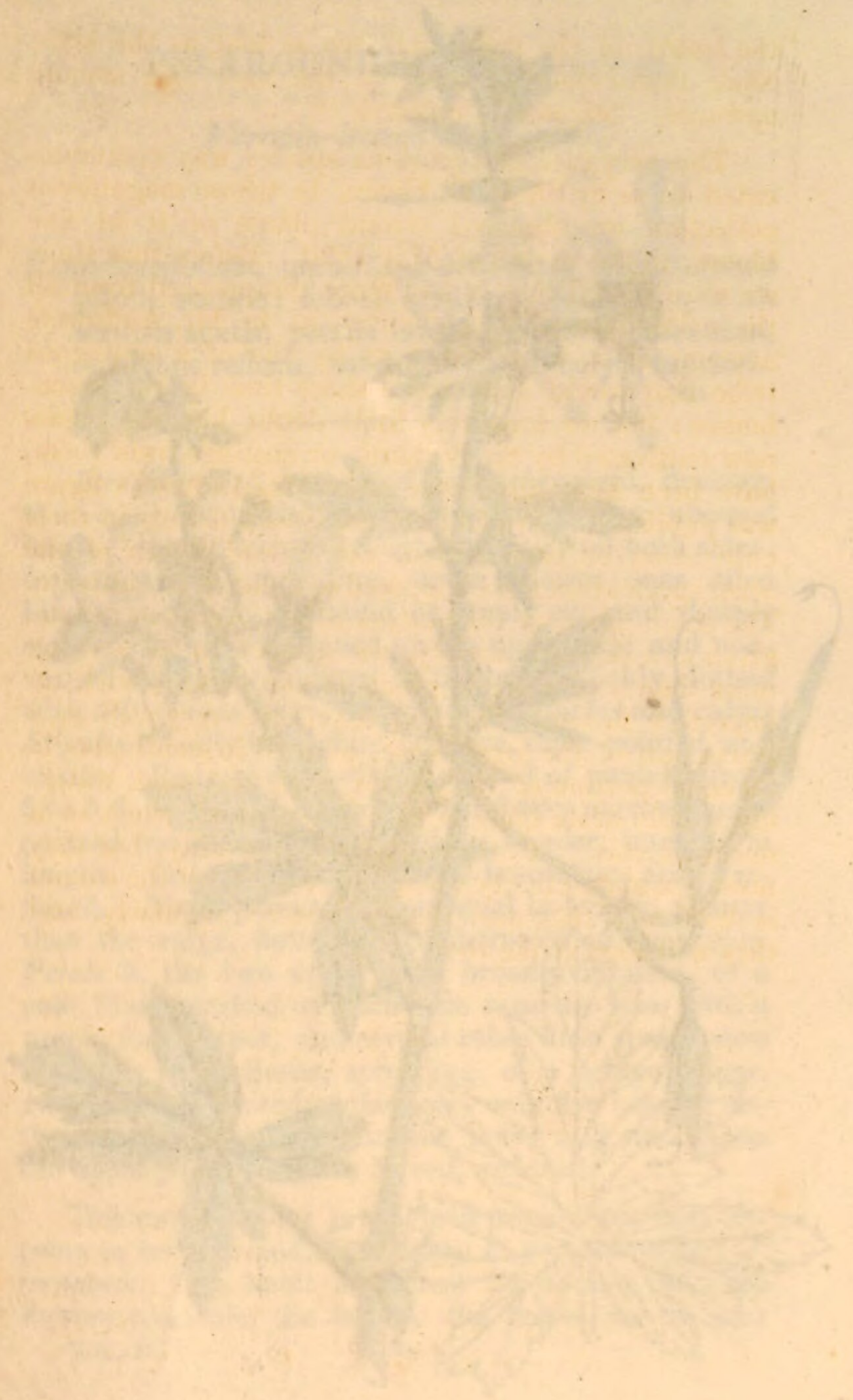
P. pallens, umbellis plurifloris, scapo ramoso, foliis tripartitis pilosis; segmentis lateralibus minoribus lobato-dentatis: terminalibus elongatis inciso-dentatis, petalis patentibus, caule suffruticoso carnoso decumbente.

Geranium pallens. *Andrews's geran. c. ic.*

Stem suffruticose, short and succulent, branched: *branches* decumbent and swollen at irregular distances. *Leaves* deeply 3-parted, hairy: lower segments small, divaricate, sometimes lobed, unequally toothed; upper one elongated, obovate, unequally cut and toothed, teeth terminated with a small arista. *Petioles* slender, slightly flattened on the upper side and rounded on the lower, widened at the base, thinly clothed with long white horizontal hairs, as are the peduncles, calyx, and nectariferous tube. *Stipules* joined to the base of the petioles, widely lanceolate, taper-pointed, and generally forked. *Scape* branching and leafy at the base of the peduncles. *Peduncles* cylindrical, a little bent upwards, several-flowered. *Involucre* of several bractes, which are lanceolate, acute, and fringed. *Calyx* 5-cleft, segments lanceolate, acute, fringed; the upper one erect, the others reflexed or revolute. *Nectariferous tube* sessile, very long, but unequal in length, four or five times as long as the calyx, much flattened and furrowed on each side. *Petals* 5, spreading, of a pale cream-colour, the two upper ones obovate, emarginate, slightly reflexed, lower ones spatulate. *Filaments* 10, slightly united at the base, 7 bearing anthers, the two upper ones very short, nearly sessile, three about half

the length of the style, and two as long as the style. *Style* flesh-coloured, hairy at the base and smooth upwards. *Stigmas* 5, reflexed.

This very rare and curious species was communicated to us by Sir R. C. Hoare, in whose magnificent collection we observed several plants of it in fine bloom, in the month of May 1820. Before that time, we were fearful that it had quite disappeared from all the collections of this country, as in Mr. Andrews's account of it, it is stated to be one of a numerous tribe that would exist but a short time in our greenhouses; but we have very little doubt but the plants now cultivated by Sir Richard, or cuttings from them, have been kept alive ever since Mr. Andrews's figure was published. We find not the least difficulty in their cultivation or propagation, nor indeed in any of the other species that were supposed so difficult to cultivate. The small figure at the bottom of Mr. Andrews's plate, given as a different variety, we suspect to be nothing more than a very weak plant of the present with an imperfect flower. We find it succeed very well in a warm part of the greenhouse, planted in small pots in an equal portion of turfy loam, peat, and sand, watering it only when quite dry, and not at all when in a dormant state. Cuttings strike root readily, but they must remain quite dry when first planted till the wound is dried up; they may then be watered regularly, and they will soon strike root.





PELARGONIUM verbenæfolium.

Vervain-leaved Stork's-bill.

P. verbenæfolium, umbellis 3-5 florisve, foliis ternatis pilosis scabris: foliolis sessilibus pinnatifido-incisis serratis acutis, petalis inferis linearibus patentibus, calycibus reflexis, tubo nectarifero calyce breviori.

Stem shrubby, branching; *branches* rigid, flexuose, thickly clothed with soft villous spreading unequal hairs. *Leaves* ternate, rough and hairy on both sides: *leaflets* sessile, spreading, acute; lower ones often bifid, upper one pinnatifid or deeply cut and sharply sawed. *Petioles* flattened on the upper side and convex on the lower, dilated at the base, thickly clothed with soft villous hairs, as are the peduncles and calyx. *Stipules* broadly lanceolate, concave, taper-pointed, and ciliate. *Peduncles* growing in a kind of panicle, from 3 to 5 flowered. *Involucre* of 5 or 6 very narrow sharp-pointed fringed bractes. *Pedicels* slender, unequal in length. *Calyx* 5-cleft, segments lanceolate, acute, reflexed. *Nectariferous tube* unequal in length, shorter than the calyx, flattened and furrowed on each side. *Petals* 5, the two upper ones broadly ligulate, of a pale lilac, marked on each side near the base with a purple forked spot, and several other little spots below it; lower petals linear, spreading, of a lighter colour. *Filaments* 10, united at the base, only five bearing anthers. *Style* red, hairy on the lower and smooth on the upper part. *Stigmas* 5, red, reflexed.

This curious plant is a hybrid production, and appears to be intermediate between *P. graveolens* and *P. ternatum*. The habit is nearest the former, and the flowers resemble the latter; the leaves are as near

as possible intermediate between the two. It is a hardy free-growing plant and an abundant bloomer, and is desirable on account of its singularity. A mixture of turfy loam and peat is a very proper soil for it, or any light vegetable mould. Cuttings strike root readily, planted in pots and placed in a sheltered situation.

Our drawing was taken from a fine plant in the magnificent collection of Robert H. Jenkinson, Esq.

Stems shrubby, branching; leaves rigid, flexuose, thickly clothed with soft villous spreading unequal hairs. Lower leaves, rough and hairy on both sides; leaflets sessile, spreading, acute; lower ones often divided, upper ones pinnatifid or deeply cut and sharply serrate. Petioles flattened on the upper side and convex on the lower, dilated at the base, thickly clothed with soft villous hairs, as are the peduncles and calyx. Stipules broadly lanceolate, connate, taper-pointed, and ciliate. Rachis growing in a kind of panicle, from 3 to 5 flowered. Bractlets of 5 or 6 very narrow spatulate pointed linear bracts. Flowers slender, nodding in length. Calyx 5-lobed, segments lanceolate, acute, reflexed. Petals 5, the two upper ones broadly ligulate, of a pale lilac, marked on each side near the base with a purple forked spot, and several other little spots below; the lower petals linear, spreading, of a lighter colour. Stamens 10, united at the base, only five bearing anthers. Style red, hairy on the lower and smooth on the upper part. Stigma 5, red, reflexed.

This curious plant is a hybrid production, and appears to be intermediate between *P. grandifolium* and *P. tenuifolium*. The habit is nearest the former, and the flowers resemble the latter; the leaves are more



C. D. Smith. del.

Pub by J. Ridgway 170 Piccadilly Feb. 1. 1823

J. Watts. sc.

PELARGONIUM Robinsoni.

Robinson's Stork's-bill.

P. Robinsoni, umbellis multifloris, foliis cordatis acutis undulatis obsolete lobatis cartilagineo-dentatis utrinque pubescentibus, stipulis cuneatis inæqualiter dentatis cuspidatis, tubo nectarifero calycem subæquante.

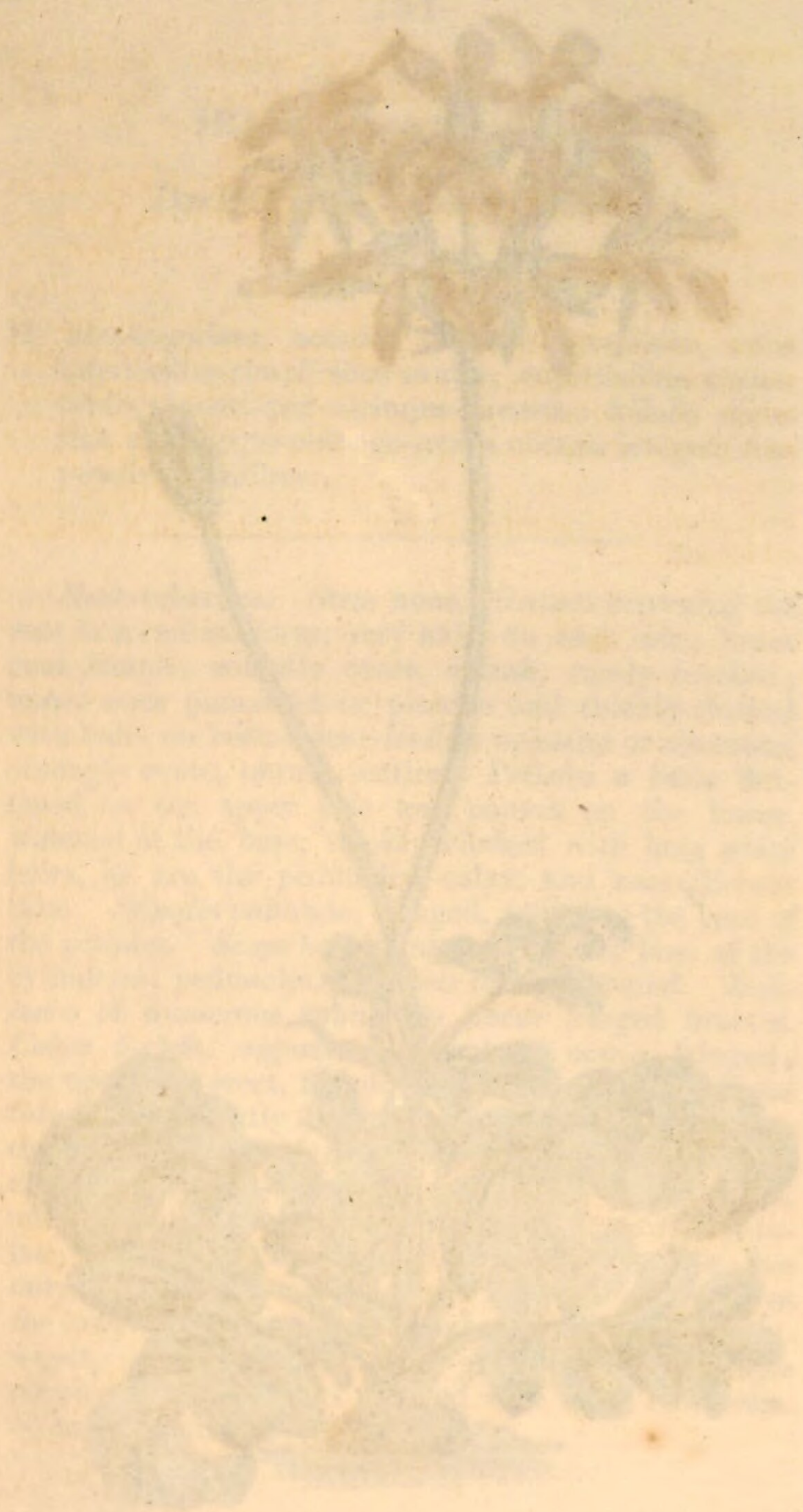
Pelargonium Robinsoni. Dennis MSS.

Stem shrubby, erect, not much branched; *branches* thickly clothed with long villous hairs, as are the pedicles, stipules, peduncles, and calyx. *Leaves* very large, lower ones about 4 or 5 inches long and the same in breadth, cordate, acute, very much undulate, slightly lobed, and toothed with unequal rigid teeth, densely clothed on each side with a soft pubescence, strongly nerved underneath, the nerves branching in all directions: upper leaves cuneate at the base, scarcely lobed. *Petioles* rigid, channelled on the upper side and convex on the lower, widened at the base and point. *Stipules* large, wedge-shaped, fringed, deeply but unequally toothed, with sharp points. *Peduncles* cylindrical, bearing umbels of many flowers. *Involucre* of 6 or 7 bractes, which are ovate, concave, and acute. *Pedicles* about the length of the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, taper-pointed. *Nectariferous tube* about the length of the calyx, sometimes scarcely as long, flattened on each side and gibbous at the base. *Petals* 5, of a pale blush, the two upper ones broadly ovate, oblique at the base, with a dark purple spot in the centre, and from the base branch numerous dark lines; lower petals oblongly oval with rounded points. *Filaments* 10,

150
united at the base, seven bearing anthers. *Style* hairy
at the base and smooth on the upper part. *Stigmas* 5,
purple, reflexed.

Our drawing of this magnificent plant was taken
at the Nursery of Mr. Dennis, Grosvenor Row, Chelsea,
where it was raised from seed. It is of hybrid origin,
and we suspect one of its parents to be *P. involucratum*
v. *incarnatum*, and the other may be *P. triumphans* or
some one nearly allied. It is a very robust grower and
an abundant bloomer, and makes a fine appearance
when covered with blossoms: it is also very hardy,
and would thrive well in a mixture of rich turfy loam
and peat, or any rich vegetable soil. Cuttings also
root readily, if planted in pots and placed in a shelter-
ed situation.

Stems shrubby, erect, not much branched; branches
thickly clothed with long villous hairs, as are the pe-
dicles, stipules, peduncles, and calyx. Leaves very
large, lower ones about 4 or 5 inches long and the
same in breadth, coriaceous, entire, very much undulate,
slightly lobed and toothed with unequal rigid teeth,
densely clothed on each side with a soft pubescence,
scarcely nerved underneath, the nerves branching in
all directions: upper leaves concave at the base,
scarcely lobed. Petioles rigid, channelled on the up-
per side and convex on the lower, widened at the base
and pointed. Stipules large, wedge-shaped, tinged
deeply but unequally toothed with sharp points. Pe-
duncles cylindrical, bearing umbels of many flowers.
Involucres of 6 or 7 bracts, which are ovate, con-
cave and acute. Petals about the length of the
rectangular tube. Calyx 5-lobed, segments lanceolate,
taper-pointed. Ventricle of the tube about the length of
the calyx, sometimes scarcely as long, flattened on
each side and gibbous at the base. Petals 5, of a pale
blush, the two upper ones broadly ovate, elliptic at
the base, with a dark purple spot in the centre, and
from the base branch numerous dark lines; lower pe-
tals oblongly oval with rounded points. Filaments 10





C. D. Smith. del.

Pub by J. Ridgway 170 Piccadilly Feb. 1. 1823.

J. Watts

HOAREA *atrosanguinea*.

Dark Crimson-coloured Hoarea.

H. *atrosanguinea*, acaulis, umbella composita, foliis inferioribus simplicibus ovatis; superioribus pinnatifidis pinnatisque utrinque hirsutis: foliolis oppositis alternisque oblongo-ovatis obtusis integerrimis, petalis patentibus.

Root tuberous. *Stem* none. *Leaves* crowning the root in a radiate form, very hairy on each side; lower ones simple, roundly ovate, obtuse, rarely toothed; upper ones pinnatifid or pinnate and thickly clothed with hairs on both sides: leaflets opposite or alternate, oblongly ovate, obtuse, entire. *Petioles* a little flattened on the upper side and convex on the lower, widened at the base, thickly clothed with long white hairs, as are the peduncles, calyx, and nectariferous tube. *Stipules* subulate, fringed, joined to the base of the petioles. *Scape* branching, leafy at the base of the cylindrical peduncles. *Umbels* many-flowered. *Involucre* of numerous subulately linear fringed bractes. *Calyx* 5-cleft, segments lanceolate, acute, fringed; the upper one erect, the others reflexed. *Nectariferous tube* sessile, slightly flattened on each side, about twice the length of the calyx. *Petals* 5, of a brilliant dark crimson; the two upper ones largest, ligulate, flat, and distinct at the base, lower ones narrowly spatulate, spreading. *Filaments* 10, united into a tube, five only bearing anthers, the upper one twice as short as the lower ones; *sterile ones* subulate and curved inwards. *Pollen* of a bright golden colour. *Style* purple, the lower part covered with short stiff hairs. *Stigmas* 5, purple, reflexed.

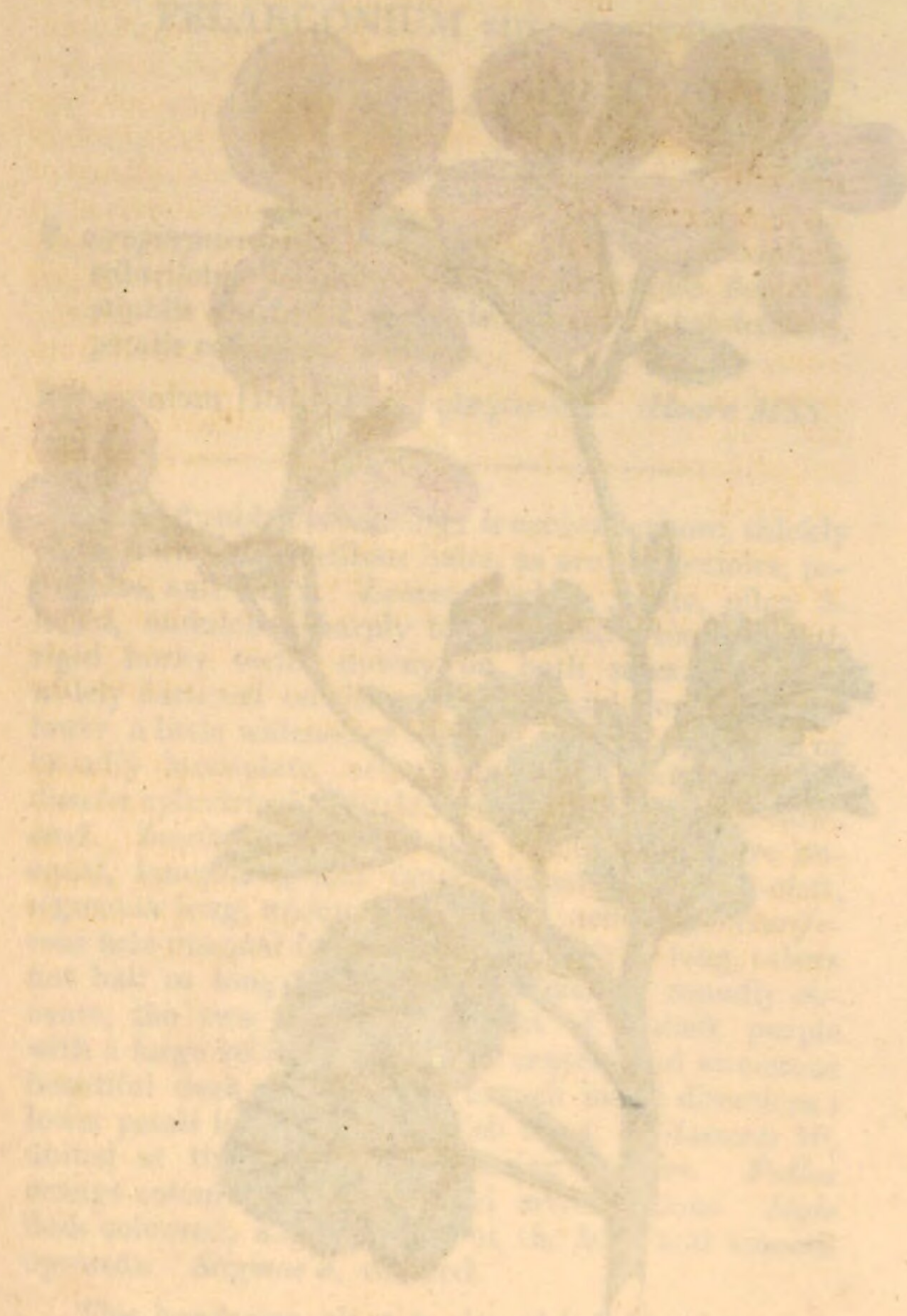
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This little brilliant flowering plant is of hybrid origin, and was raised at the Nursery of Mr. Colvill from a seed of *Dimacria pinnata* that had been fertilized by *Hoarea melanantha*. Although the mule was produced between two such different species, its flowers are still quite perfect, and it produces abundance of perfect seeds. Here we have a brilliant flower of a dark crimson, produced from two plants, the flowers of one being of a dirty cream-colour slightly tinged with rose, and the other of a velvety black. *H. elegans*, published in a former number, was raised from a seed of the same plant mixed with *H. atra*; in that the colour was not so deep nor so brilliant: this we might expect, as *H. atra* is of a dark brown, instead of black.

Numerous other interesting and curious mules have been raised at Mr. Colvill's Nursery, from the tuberous-rooted species, and many of them are very handsome. In Mr. Jenkinson's collection, also, a great many have been raised, and some curious anomalies between the tuberous-rooted and shrubby species.

The present plant thrives well in an equal mixture of turfy loam, peat, and sand, keeping it quite dry when in a dormant state, and watering it regularly as soon as it begins to grow afresh. It may be propagated by the little tubers from the roots, like most of the other tuberous-rooted species, or by seeds.

FRUITING PLANT



The fruiting plant of this species is a small tree or shrub, with a trunk that is often covered in a thick, white, warty bark. The leaves are large, ovate, and have a prominent midrib. The fruits are large, rounded, and hang in clusters from the ends of the branches.



PELARGONIUM atropurpureum.

Dark purple Stork's-bill.

P. atropurpureum, umbellis plurifloris, foliis cordatis subtrilobis undulatis inæqualiter argute dentatis, stipulis cordato-lanceolatis acuminatis subdentatis, petalis rotundato-obovatis.

Pelargonium Hoareanum, purpureum. *Hoare MSS.*

Stem shrubby, branching; *branches* flexuose, thickly clothed with short villous hairs, as are the petioles, peduncles, and calyx. *Leaves* cordate, acute, often 3-lobed, undulate, sharply but unequally toothed with rigid horny teeth, downy on both sides. *Petioles* widely flattened on the upper side and convex on the lower, a little widened at the base. *Stipules* cordate or broadly lanceolate, acuminate, often toothed. *Peduncles* cylindrical, a little bent upwards, several-flowered. *Involucre* of from 4 to 6 bractes, which are unequal, lanceolate, and taper-pointed. *Calyx* 5-cleft, segments long, unequal, lanceolate, acute. *Nectariferous tube* unequal in length, some nearly as long, others not half as long as the calyx. *Petals* 5, roundly obovate, the two uppermost largest of a dark purple with a large velvety spot in the centre, and numerous beautiful dark stripes which branch in all directions; lower petals lighter with reddish veins. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Germen* and *aristæ* villous. *Style* flesh-coloured, slightly hairy at the base and smooth upwards. *Stigmas* 5, reflexed.

This handsome plant is also of hybrid origin, and was raised from seed in the collection of Sir R. C. Hoare: from a fine flowering specimen, communicated

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by him, our drawing and description were taken. The seed that produced it was saved from *P. Hoareanum*, which we suspect had been fertilized by the pollen of *P. principissæ*. The habit of the plant partakes chiefly of the former, but the colour and number of the flowers correspond with the latter. *P. Hoareanum* never produces more than two flowers on its peduncle, often only one, whereas the present plant is generally 4 or 5 flowered. It makes a compact snug little bush, and its flowers are produced in abundance, the colours of which are much more brilliant than any art of the colourer can imitate. It succeeds well in a mixture of sandy loam and peat; and cuttings will root without difficulty, if planted in pots in the same kind of soil, and placed on a shelf in the greenhouse.

Stem shrubby, branching; branches flexuose, thickly clothed with short villous hairs, as are the petioles, branches, and calyx. Leaves cordate, acute, often 3-lobed, undulate, sharply but unequally toothed with right horny teeth, downy on both sides. Petioles widely flattened on the upper side and convex on the lower, a little widened at the base. Stipules cordate or broadly lanceolate, acuminate, often toothed. Flowers cylindrical, a little bent upwards, several-flow-ered. Anthers of from 4 to 6 branches, which are unequal, lanceolate, and taper-pointed. Calyx 5-lobed, segments long, unequal, lanceolate, acute. Petals five, unequal in length, some nearly as long, others not half as long as the calyx. Petals 5, roundly ob-ovate, the two uppermost largest of a dark purple with a large velvety spot in the centre, and numerous beautiful dark stripes which branch in all directions; lower petals lighter with reddish veins. Filaments 10, united at the base, seven bearing anthers. Pollen orange-coloured. Germen and ovary villous. Style flesh-coloured, slightly hairy at the base and smooth upwards. Stigma 6, reflexed.

This handsome plant is also of hybrid origin, and was raised from seed in the collection of Sir R. O. Hoare; from a fine flowering specimen, communicated





D. Smith. del.

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J. Watts. sc.

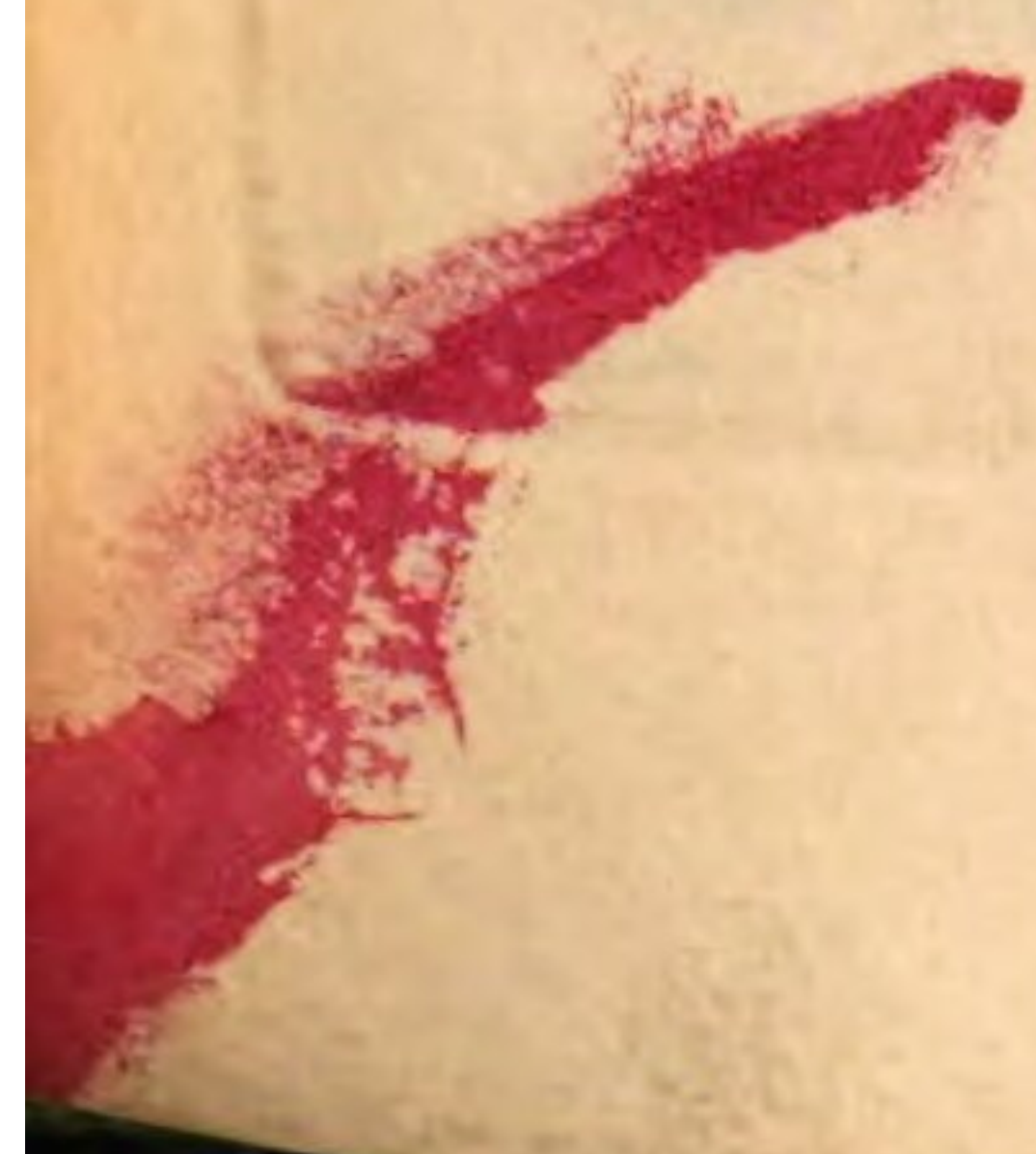
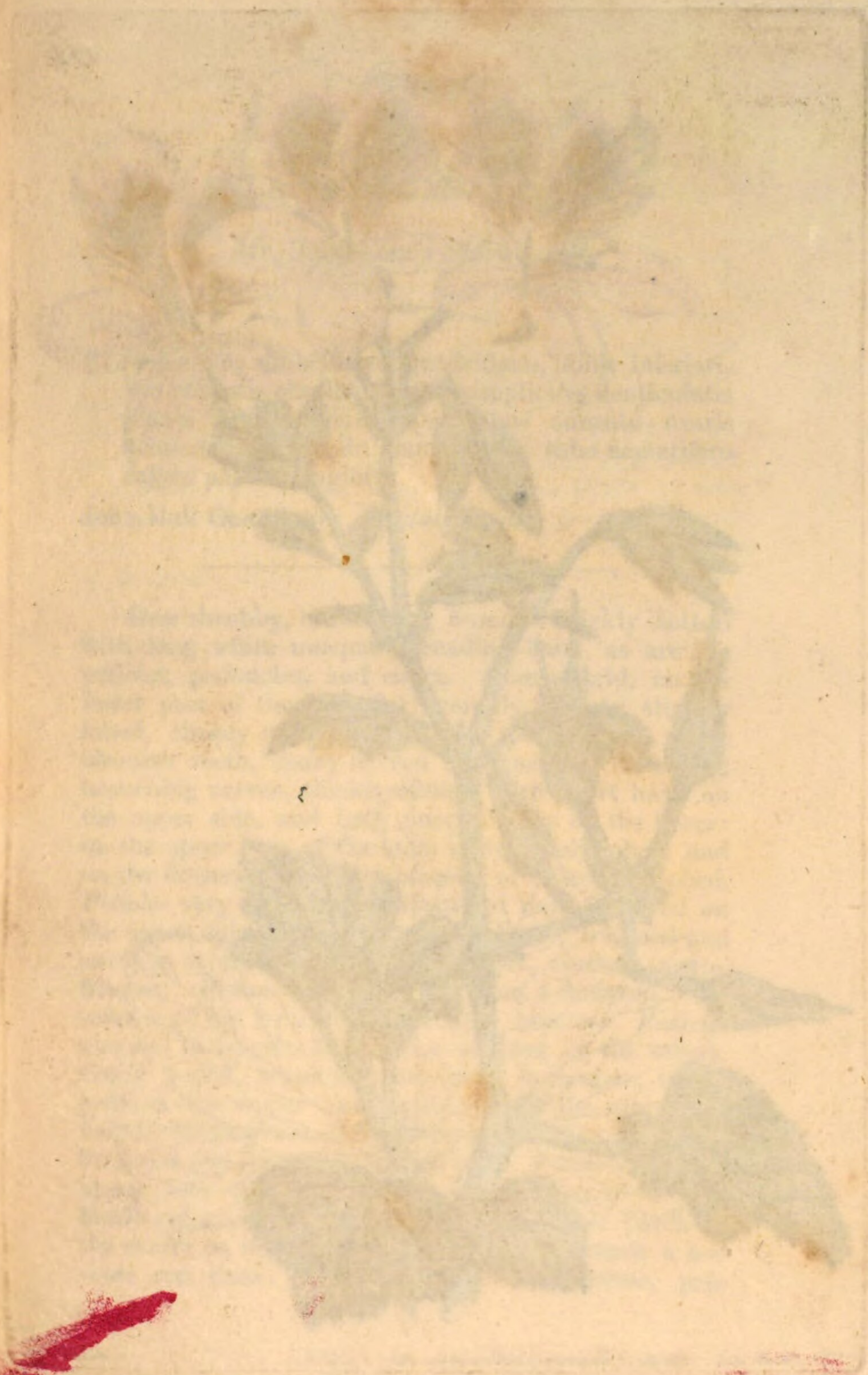
PELARGONIUM pyrethriifolium.

Feverfew-leaved Stork's-bill.

P. pyrethriifolium, pedunculis 2-3 florisve, foliis cordatis palmato-bipinnatifidis scabris margine planis: segmentis oblongo-lanceolatis obtusis dentatis, petalis inferis ligulatis, tubo nectarifero longitudine calycis.

Stem shrubby, much branched; *branches* short, thickly clothed with soft villous unequal hairs, as are the petioles, peduncles, and calyx. *Leaves* cordate, palmately bipinnatifid with flat margins, rough and hairy on both sides, of a hoary colour: segments oblongly lanceolate, obtuse, unequally toothed with blunt rounded teeth, or sometimes entire. *Petioles* about the length or a little longer than the leaves, slightly flattened on the upper side and rounded on the lower, a little widened at the base. *Stipules* cordately lanceolate, oblique, taper-pointed and fringed. *Peduncles* cylindrical, 2 or 3 flowered. *Involucre* of 4 oblong or lanceolate, acute, fringed bractes. *Pedicles* about double the length of the nectariferous tube. *Calyx* 5-cleft, upper segment ovate, bluntish, erect, the others lanceolate, reflexed. *Nectariferous tube* about the length of the calyx, much flattened on each side, and gibbous at the base. *Petals* 5, the two uppermost spatulately obovate, of an orangy red colour, marked in the centre with a purple patch which joins a few purple stripes from the base: lower petals narrowly ligulate, of a lighter colour. *Filaments* 10, connected at the base, 7 bearing anthers. *Style* red, very hairy. *Stigmas* 5, red, reflexed.

A very curious hybrid production, raised by Mr. Smith, in the collection of the Earl of Liverpool, at Coombe Wood, from a seed of *P. fulgidum* that was fertilized with the pollen of *P. radula*, and it is, as near as possible, intermediate between the two. It is rather more difficult of cultivation than most of its relatives, its leaves being very apt to canker and turn brown if exposed to too much sun, or if watered over the leaves. It thrives best in autumn and winter with us; the flowers also are much finer in autumn, as its anthers are only perfect at that season, and the flowers are double the size they are at other times, such as are represented in our figure, which was the most perfect state of the plant. It succeeds best in an equal mixture of turfy loam, peat, and sand; and cuttings strike root readily, if planted in pots in the same kind of soil, and placed on a shelf in the greenhouse.





PELARGONIUM Jenkinsoni.

Mr. Jenkinson's Stork's-bill.

P. Jenkinsoni, umbellis subquadrifloris, foliis inferioribus cordatis obsolete lobatis simpliciter denticulatis planis multinerviis: superioribus cuneato-ovatis acutiusculis, calycibus acuminatis, tubo nectarifero calyce parum longiori.

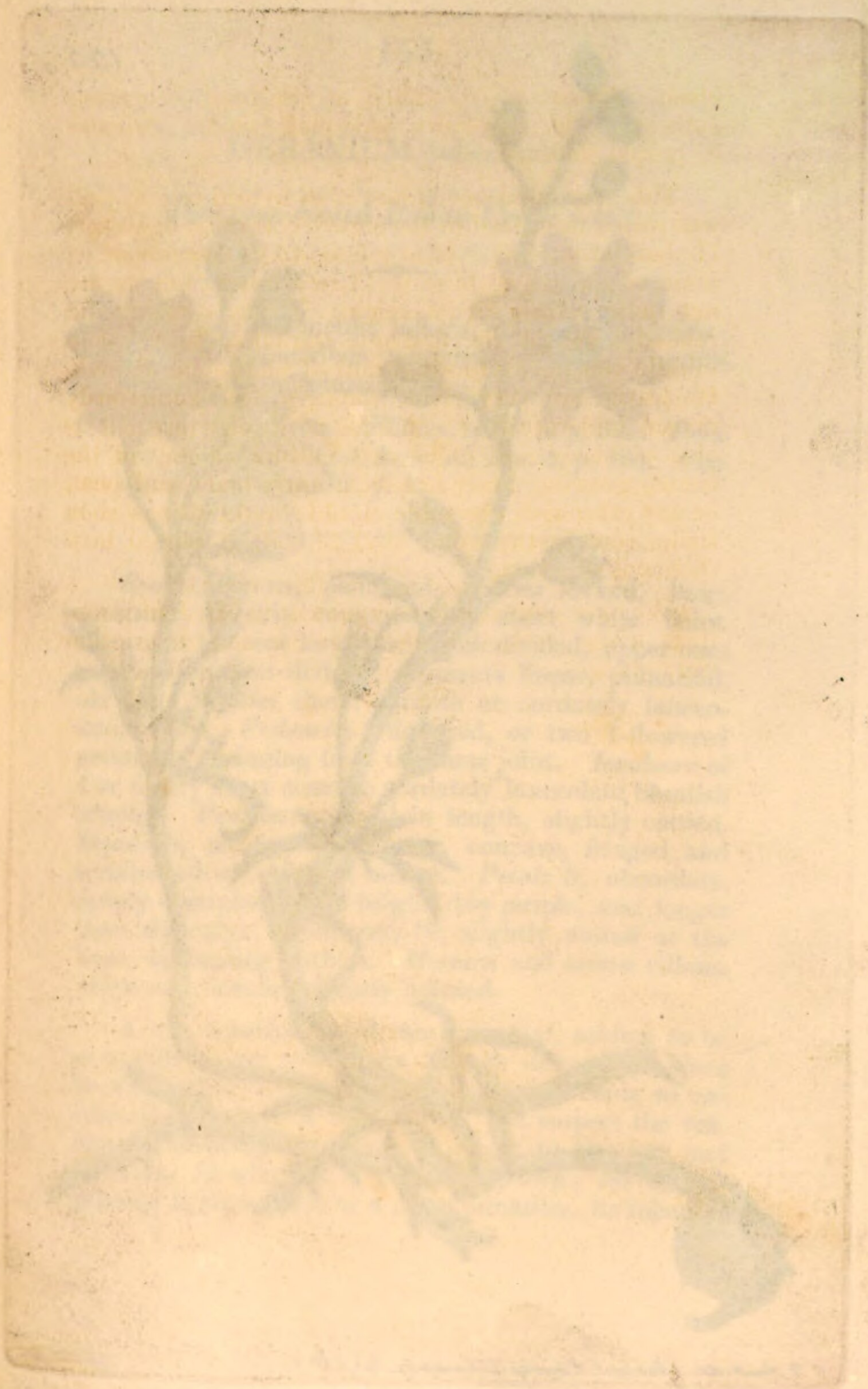
John Bull Geranium. *Hortulanorum.*

Stem shrubby, branching; *branches* thickly clothed with long white unequal spreading hairs, as are the petioles, peduncles, and calyx. *Leaves* rigid, on the lower part of the stem flat, roundly cordate, slightly lobed, simply and nearly equally toothed with short bluntish teeth, many-nerved underneath with strong branching nerves, thickly clothed with short hairs on the upper side, and long unequal ones on the lower: on the upper part of the stem more deeply lobed, and on the flowering branches cuneate or ovate, not lobed. *Petioles* very short, much flattened and furrowed on the upper side and convex on the lower, widened and swollen at the base. *Stipules* short, cordate, acute, fringed. *Peduncles* cylindrical, often 4-flowered. *Involute* of six ovate acute fringed bractes. *Pedicles* unequal in length, some twice as long as the others. *Calyx* 5-cleft, segments very long, lanceolate, taper-pointed, the upper one largest, erect, the others reflexed. *Nectariferous tube* a little longer than the calyx, flattened and furrowed on each side. *Petals* 5, the two upper ones obovate, oblique at the base, of a pale blush colour, with a very large dark purple patch in the centre on a red ground, and from it branch a few short red lines; lower petals oblong, obtuse, pale

blush. *Filaments* 10, united at the base, 7 bearing anthers. *Style* very hairy, pale pink colour. *Stigmas* 5, purple, reflexed.

This very handsome plant is of hybrid origin, and was raised from seed in the superb collection of Robert H. Jenkinson, Esq. It is related to *P. Gardneriæ* or some of the tribe allied to *P. maculatum*, but we are not quite certain of its origin: it may certainly be ranked amongst the first-rate varieties, being of a middle stature as to size, and of handsome growth. Its leaves are very rigid, strongly and numerously nerved underneath, which adds to its elegance: it is also as hardy and of as easy culture as any of the genus, growing freely in a light turfy loam and peat, or any other rich vegetable mould; and cuttings soon strike root in the same kind of soil, if placed in a sheltered situation.

We have named it in compliment to Mr. Jenkinson, from whose collection our drawing and description were taken.



501254



GERANIUM tuberosum.

Tuberous-rooted Italian Crane's-bill.

G. tuberosum, pedunculis bifloris, foliis multipartitis : segmentis linearibus pinnatifidis obtusis, petalis obcordatis emarginatis calyce longioribus.

Geranium tuberosum. *Willden. sp. pl.* 3. p. 698. *Pers. syn.* 2. p. 234. *Hort. Kew. ed.* 2. v. 4. p. 184. *Cav. dis.* 4. p. 199. t. 78. f. 1.

Root tuberous, perennial. *Stems* forked, long, prostrate, thickly covered with short white hairs. *Leaves* at the root large and much divided, upper ones smaller and less divided, segments linear, pinnatifid, obtuse. *Stipules* short, cordate or cordately lanceolate, acute. *Peduncles* 2-flowered, or two 1-flowered peduncles springing from the same joint. *Involucre* of 4 or 6 very short concave cordately lanceolate bluntish bractes. *Pedicles* unequal in length, slightly curved. *Sepals* 5, nearly equal, ovate, concave, fringed and terminated with a short mucro. *Petals* 5, obcordate, deeply emarginate, of a bright rosy purple, and longer than the calyx. *Filaments* 10, slightly united at the base, all bearing anthers. *Germen* and *aristæ* villous. *Stigmas* 5, sessile, slightly reflexed.

A very handsome and rare perennial, seldom to be met with in our collections, though deserving a place in them all for its beauty and singularity, being so unlike all the others of the genus. We suspect the reason of its being so scarce is owing to the soil and situation in which it is generally grown; for if it is planted in strong soil or a moist situation, its tuberous

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roots are almost certain to rot; but it will thrive well and flower abundantly if planted in a light sandy soil in a dry situation, or if it be cultivated in a pot. A mixture of turfy loam, peat, and sand, will suit it very well. It is also a desirable plant for ornamenting rock-work; and may be increased by dividing the roots, or by seeds.

Our drawing was taken from a fine strong plant, in the Apothecaries' Garden, Chelsea, last summer.

Root tuberous, perennial. Stems forked, long, prostrate, thickly covered with short white hairs. Leaves at the root large and much divided, upper ones smaller and less divided, segments linear, pinnatifid, obtuse. Sepals short, cordate or cordately lanceolate, late, white. Petals 2-flowered, or two 1-flowered peduncles springing from the same joint. Anthers of 4 or 6 very short connectives cordately lanceolate, bluish bracte. Petals unequal in length, slightly curved. Sepals 5, nearly equal, ovate, concave, fringed and terminated with a short mucro. Petals 5, obovate, deeply concave, with a bright rose purple, and longer than the calyx. Anthers 10, slightly united at the base, all bearing anthers. Gynoecium and ovary villous. Style 5, sessile, slightly reflexed.

A very handsome and rare perennial, seldom to be met with in our collections, though deserving a place in them all for its beauty and singularity, being so unlike all the others of the genus. We suspect the reason of its being so rare is owing to the soil and situation in which it is generally grown; for it is planted in strong soil or a moist situation, its tuberous



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PELARGONIUM lepidum.

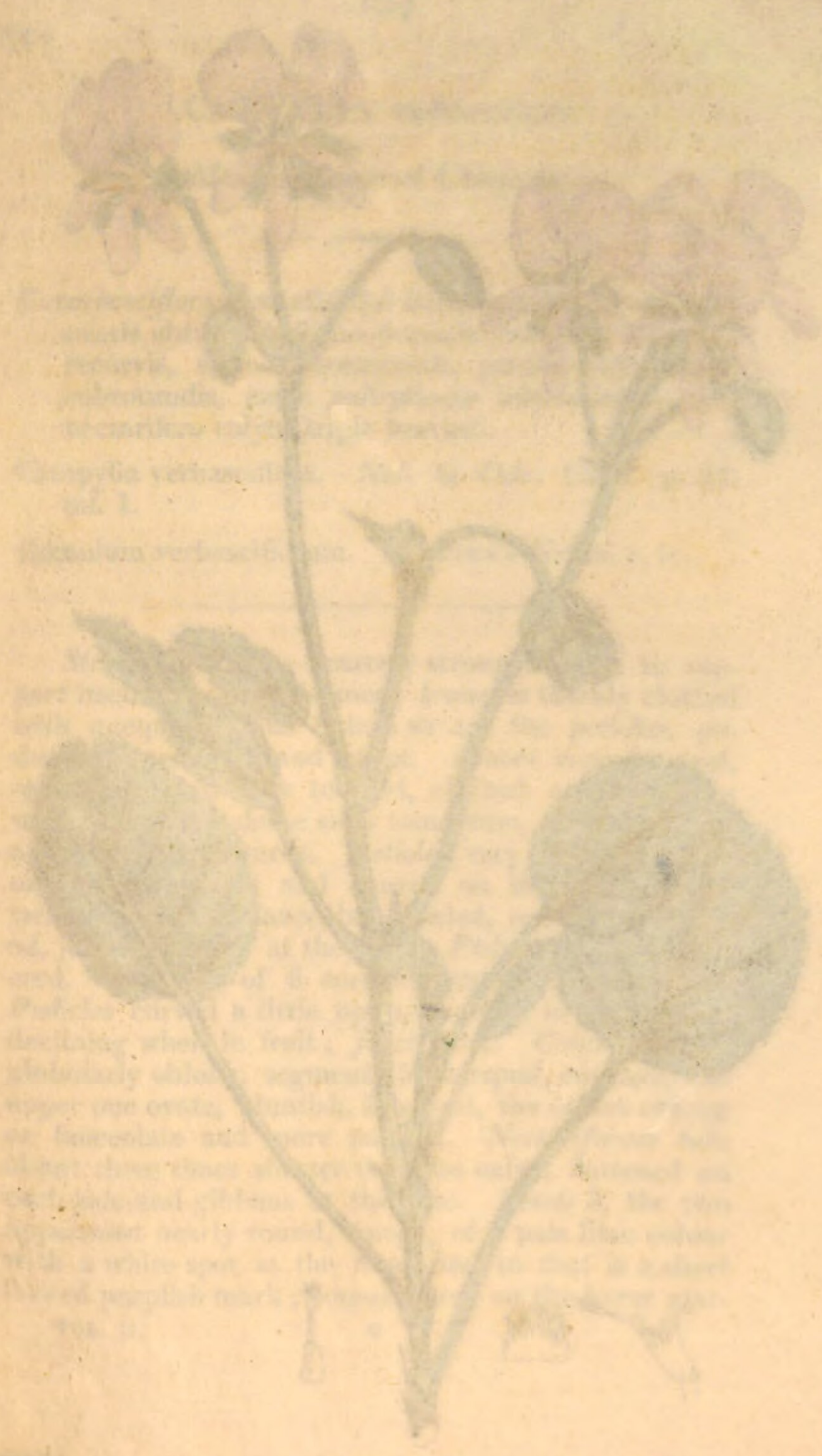
Pretty Stork's-bill.

P. lepidum, umbellis subquadrifloris, foliis inferioribus cordatis subquinelobis undulatis inæqualiter crenato-dentatis hirsutis; superioribus ovatis basi cuneatis, stipulis cordato-ovatis acutis subdentatis, tubo nectarifero calyce reflexo multo breviori.

Stem shrubby, much branched; *branches* spreading, thickly clothed with long shaggy hairs. *Leaves* on the lower part of the stem cordate, 5-lobed, undulate, unequally toothed with rigid bluntish teeth, covered on each side with unequal villous hairs; upper leaves ovate, not lobed, cuneate at the base, more sharply toothed. *Petioles* flattened and furrowed on the upper side and convex on the lower, widened at the base, thickly covered with unequal villous hairs, as are the peduncles and calyx. *Stipules* short, cordately ovate, acute, ciliate, sometimes toothed. *Peduncles* long and slender, generally 4-flowered. *Involucre* of six short ovate bractes that are keeled and ciliate. *Pedicles* very unequal in length, some nearly twice as long as the others. *Calyx* 5-cleft, segments lanceolate, acute, all reflexed when the flowers are expanded. *Nectariferous tube* nearly twice shorter than the calyx, flattened on each side. *Petals* 5, of a pale pink colour, the two upper ones obovate, oblique at the base, stained with red in the centre, from which and the base branch several pale red lines: lower petals oblong, obtuse, of rather a paler colour. *Filaments* 10, connected at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* and *aristæ* villous. *Style* pale pink, very hairy. *Stigmas* 5, purple, reflexed.

This elegant little plant is of hybrid origin, and was raised from seed last spring at the Nursery of Mr. Colvill. We have not ascertained its parents, but suspect one of them to be *P. calycinum*, the other might be *P. dumosum* or some one nearly related to it. It flowered very young, and continued in bloom till late in autumn, and we think it a very desirable plant, the colour of its flowers being so different from all others. It seems to be as hardy as any of the genus, and thrives well in a mixture of turfy loam and peat; cuttings also strike root readily, if planted in pots and placed in a sheltered situation.

Our drawing was taken at the Nursery of Mr. Colvill in September last.





C. D. Smith. del.

Pub by J. Ridgway 170 Piccadilly Apr^l. 1. 1823.

J. Watts. sc.

CAMPYLIA verbasciflora.

Mullein-flowered Campylia.

C. verbasciflora, umbellis 3-5 florisve, foliis subrotundo-ovatis obtuse duplicato-dentatis, margine undulatis recurvis, stipulis acuminatis, petalis superioribus subrotundis, caule suffruticoso adscendente, tubo nectarifero calyce triplo breviori.

Campylia verbasciflora. *Nob. in Colv. Catal. p. 21. col. 1.*

Geranium verbasciflorum. *Andrews's Geran. c. ic.*

Stem suffruticose, scarcely strong enough to support itself without assistance; *branches* thickly clothed with unequal villous hairs, as are the petioles, peduncles, pedicles, and calyx. *Leaves* roundly oval, obtusely and doubly toothed, clothed on both sides with a short soft dense silky tomentum, margins waved and rolled backwards. *Petioles* very long, flattened on the upper side and convex on the lower, often twisted. *Stipules* lanceolate, keeled, sometimes toothed, joined together at the base. *Peduncles* 3 to 5 flowered. *Involucre* of 6 cordate acute fringed bractes. *Pedicles* curved a little upwards when in flower, but declining when in fruit; *fruit* erect. *Calyx* inflated, globularly oblong, segments 5, unequal, concave, the upper one ovate, bluntish, 3-nerved, the others oblong or lanceolate and more pointed. *Nectariferous tube* about three times shorter than the calyx, flattened on each side and gibbous at the base. *Petals* 5, the two uppermost nearly round, waved, of a pale lilac colour with a white spot at the base, and in that is a short forked purplish mark; *unguis* eared on the lower mar-

gin, lower petals spatulately ligulate, pale lilac. *Filaments* 10, hairy, united at the base, five only bearing anthers, which in our specimens were all imperfect, two upper sterile ones acute and recurved like hooks, from the bend to the base clothed with long spreading hairs. *Germen* and *aristæ* villous. *Style* red, hairy on the lower part and smooth on the upper. *Stigmas* 5, purple, revolute.

This plant is generally considered as a distinct species, but we are inclined to think it a hybrid production, as it is so nearly intermediate between *C. blattaria* and *C. cana*. We had for some time supposed that it was lost to our collections, only knowing it from Mr. Andrews's figure: but in a visit to Sir R. C. Hoare's, we were gratified with the sight of fine plants of it in full bloom; and from a specimen communicated by Sir Richard, our drawing and description were taken. It requires exactly the same kind of treatment as the other species of this genus. An equal mixture of light turfy loam, peat, and sand, is the best soil for it; and young cuttings, planted in the same kind of soil and placed on a shelf in the greenhouse, will soon strike root.

Numerous handsome and interesting mules, both of this genus and *Phymatanthus*, and some between the two, have been raised from seed at the Nursery of Mr. Colvill. The flowers of some of them are very large, and the colours fine. We are afraid that several of the old species have entirely disappeared from our collections, as we do not know where to find *P. eriostemon* or *P. coronopifolium* of Jacquin.

PLANTAIN

Plantain is a very common weed, growing in all sorts of places, especially in the corners of fields and along the sides of roads. It is a very hardy plant, and will grow in the most barren soil.

The leaves of the plantain are very large and broad, and are covered with a thick, waxy substance, which makes them very difficult to tear. The leaves are also very tough, and will not break easily.

The flowers of the plantain are very small, and are arranged in a long, narrow spike. The flowers are of a pale yellow color, and are very fragrant.

The seed of the plantain is very small, and is covered with a thick, waxy substance, which makes it very difficult to break. The seed is also very tough, and will not break easily.

The plantain is a very common weed, and is found in all sorts of places. It is a very hardy plant, and will grow in the most barren soil.



E. D. Smith. del.

Pub by J. Ridgway 170 Piccadilly April 1. 1823. J. Watts. sc.

PELARGONIUM Tibbitsianum.

Mr. Tibbits' Stork's-bill.

P. Tibbitsianum, umbellis plurifloris, foliis inferioribus cordatis trilobis undulatis inæqualiter grosseque dentatis: superioribus planis cuneatis, stipulis lanceolatis subdentatis, bracteis pedicellis longioribus, tubo nectarifero calyce parum longiori.

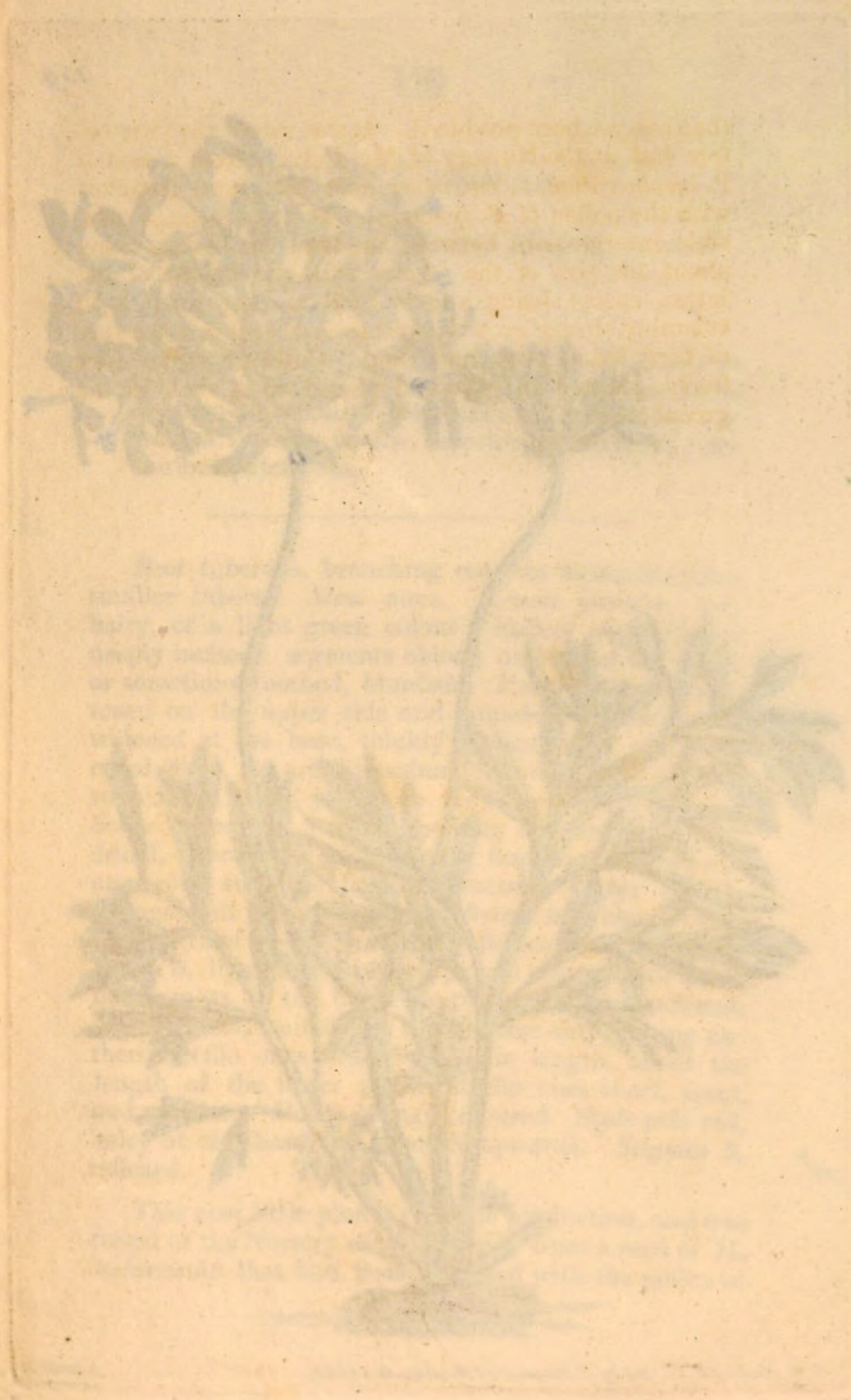
Stem shrubby, branching; *branches* thickly clothed with long soft villous hairs, as are the petioles, peduncles, and calyx. *Leaves* cordate, slightly 3-lobed, undulate, unequally and sharply toothed, thickly clothed on both sides with soft villous hairs; leaves on the flowering branches wedge-shaped at the base, rigidly and sharply toothed. *Petioles* widely flattened and furrowed on the upper side and convex on the lower, widened at the base. *Stipules* broad lanceolate, acute, fringed, sometimes toothed, some nearly cordate. *Peduncles* cylindrical, several-flowered. *Involucre* of six elliptically lanceolate, acute, fringed bractes, that are longer than the pedicles. *Calyx* 5-cleft, segments long, lanceolate, acute, reflexed. *Nectariferous tube* a little longer than the calyx, much flattened and furrowed on each side. *Petals* 5, the two upper ones roundly ovate, oblique, of a bright pink inclining to scarlet, with a large velvety spot in the centre, and below it are numerous purple lines: lower petals oblong, obtuse, of rather a lighter colour. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Style* pale, quite smooth and shining. *Stigmas* 5, purple, reflexed.

The present magnificent plant is of hybrid origin, and is the largest flowering kind of the bright reds

that has yet been produced. It was raised the year before last at the Nursery of Mr. Colvill, from a seed of *P. involucratum*, α . *maximum*, that had been fertilized with the pollen of *P. ignescens*. It is as near as possible intermediate between the two, the flowers being about the size of the former with the colour of the latter, except being a little lighter. The plant is of tolerably strong growth, and thrives well in a mixture of turfy loam, peat, and sand. Cuttings strike root freely, planted in pots and placed on a shelf in the greenhouse.

Stem shrubby, branching; flowers thickly clustered with long soft villous hairs as are the petioles, bracts, and calyx. Leaves cordate, 2-lobed, serrate, unequally and sharply toothed, finely clothed on both sides with soft villous hairs. Flowering branches erect, terminal at the base, rigidly and sharply toothed. Petioles widely flattened and narrowed on the upper side and convex on the lower, widened at the base. Stipules broad and imbricate, narrow, serrated, toothed, minutely cordate. The flowers cylindrical, several-bowered. The calyx is elliptically obovate, broad, flattened, pointed, thin, longer than the petals. Corolla 1-lobed, segments long, imbricate, acute, reflexed. The lobes are longer than the calyx, much flattened and narrowed on each side. The two upper ones broadly ovate, oblique, of a bright pink inclining to scarlet, with a large velvety spot in the centre, and below it are numerous purple lines; lower petals oblong, oblique, rather a lighter colour. Filaments 10, united at the base, seven bearing anthers. Yellows orange-coloured. Style pale, quite smooth and shining. Stigma 5, purple, reflexed.

The present magnificent plant is of hybrid origin and is the largest flowering kind of the bright reds





E. D. Smith, del. Pub. by J. Ridgway 170 Piccadilly, Ap. 1. 1823.

J. Watts, sc.

HOAREA selinifolia.

Milk-parsley leaved Hoarea.

H. selinifolia, acaulis, umbella composita, foliis pinnatis pilosis; foliolis pinnatifidis incisive; segmentis oblongo-lanceolatis subdentatis obtusiusculis, calycibus reflexis, petalis superioribus refractis inferioribus patentibus.

Root tuberous, branching out into numerous other smaller tubers. *Stem* none. *Leaves* pinnate, very hairy, of a light green colour: leaflets pinnatifid or deeply incised: segments oblong or lanceolate, entire or sometimes toothed, bluntish. *Petioles* slightly flattened on the upper side and rounded on the lower, widened at the base, thickly clothed with white unequal hairs, as are the peduncles and calyx. *Stipules* subulately linear, joined to the base of the petioles. *Scape* branching. *Peduncles* long and slender, cylindrical, bearing umbels of many flowers. *Involucre* of numerous subulate fringed bractes. *Calyx* 5-cleft, segments all reflexed. *Nectariferous tube* about twice the length of the calyx, slightly flattened on each side. *Petals* 5, ligulate, of a dark purple colour, with a few linear spots at the base, the two upper ones reflexed. *Filaments* 10, united into a tube, five only bearing anthers, fertile ones nearly equal in length, about the length of the lower petals, sterile ones short, erect, and subulate. *Pollen* orange-coloured. *Style* pale red, hairy at the base and smooth upwards. *Stigmas* 5, reflexed.

This neat little plant is a mule production, and was raised at the Nursery of Mr. Colvill, from a seed of *H. melanantha* that had been fertilized with the pollen of

some other kind. It is a very elegant plant, and, if managed well, will continue in flower the greater part of the year. Like the other tuberous-rooted sorts, it thrives best in an equal portion of turfy loam, peat, and sand, watering it only when quite dry, and not at all when in a dormant state. This, as well as many others of the free-growing tuberous-rooted kinds, may be grown very large and strong, by shifting them into large pots: they will then require but little water, and will produce an abundance of fine flowers. They may be propagated by seeds, or by the tubers of the roots.

Root tuberous, branching out into numerous other smaller tubers. Stem none. Leaves pinnate, very hairy, of a light green colour: leaflets pinnatifid or deeply incised: segments oblong or lanceolate, entire or sometimes toothed, bluish. Petioles slightly flattened on the upper side and rounded on the lower, widened at the base, thickly clothed with white unequal hairs, as are the peduncles and calyx. Stipules subulate linear, joined to the base of the petioles. Scape branching. Peduncles long and slender, cylindrical, bearing umbels of many flowers. Involucres of numerous subulate fringed bracts. Calyx 5-lobed, segments all reflexed. A very narrow tube about twice the length of the calyx, slightly flattened on each side. Petals 5, ligulate, of a dark purple colour, with a few linear spots at the base, the two upper ones reflexed. Stamens 10, united into a tube, five only bearing anthers, fertile ones nearly equal in length, about the length of the lower petals, sterile ones short, erect, and subulate. Pollen orange-coloured. Style pale red, hairy at the base and smooth upwards. Stigma 5-lobed.

This most little plant is a noble production, and was raised at the Nursery of Mr. Colville, from a seed of *H. melanocarpa* that had been fertilized with the pollen of



Small flowers, white, with
green, pointed leaves, which
are very smooth and
shiny, and are very
tender. The leaves are
very large, and are
very smooth and
shiny. The flowers are
very small, and are
very white. The leaves
are very large, and are
very smooth and shiny.
The flowers are very small,
and are very white. The
leaves are very large, and
are very smooth and shiny.
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are very smooth and shiny.



M. Hart. del.

Pub. by J. Ridgway 170 Piccadilly Ap. 1. 1829.

J. Watts. sc.

PELARGONIUM æmulum.

Rival Stork's-bill.

P. æmulum, umbellis plurifloris, foliis cordato-reniformibus sublobatis denticulatis concaviusculis, stipulis lanceolatis acutis, petalis omnibus obovatis, tubo nectarifero calyce reflexo parum breviori.

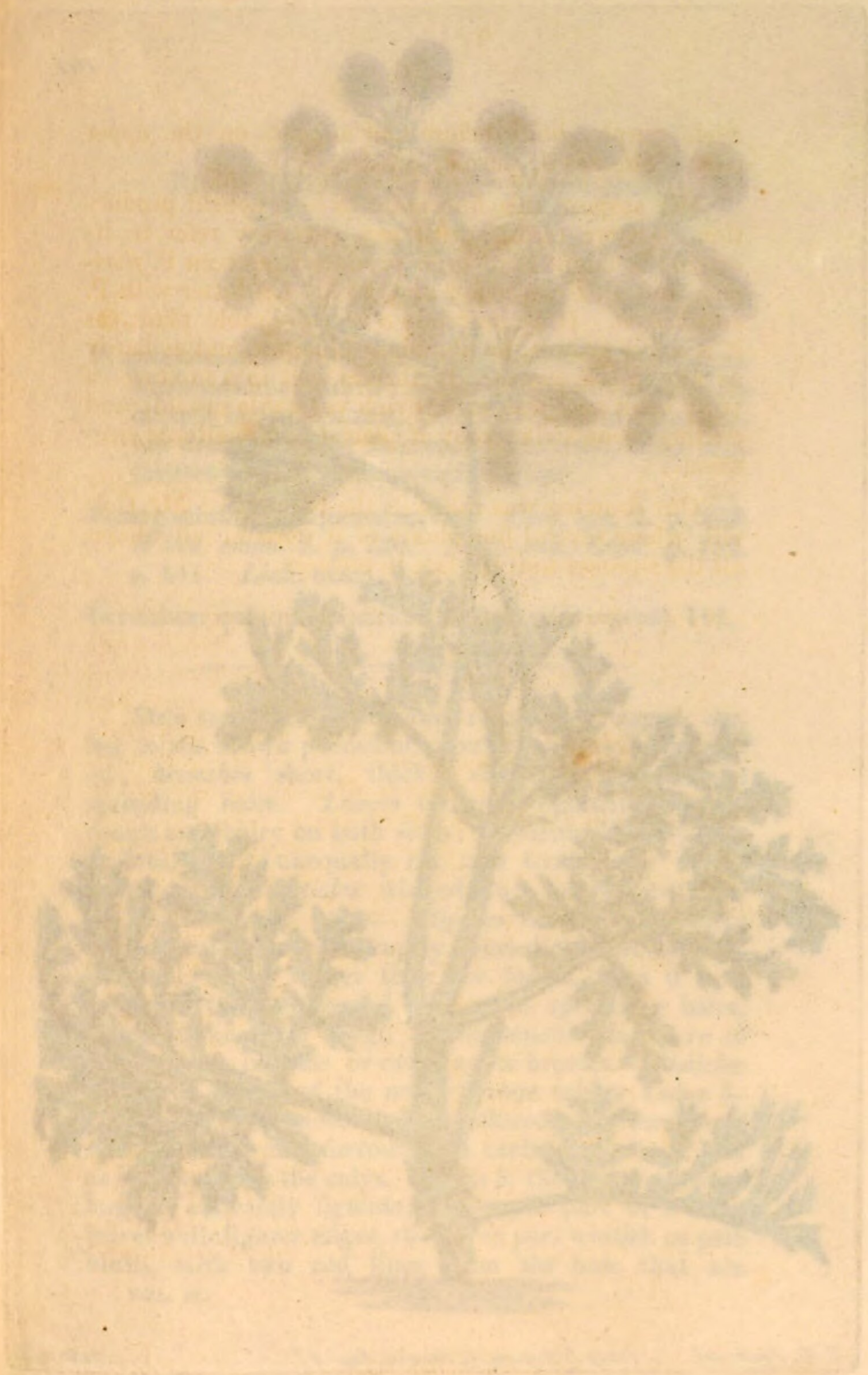
Pelargonium æmulum. *Nob. in Colv. catal. p. 22. col. 1.*

Stem shrubby, much branched; *branches* thickly clothed with unequal spreading hairs, as are the petioles, peduncles, and calyx. *Leaves* between cordate and reniform, about as wide as long, slightly concave, obsoletely lobed, and toothed with very short sharp teeth, hairy on both sides. *Petioles* scarcely as long as the leaf, much flattened and furrowed on the upper side and convex on the lower, widened and swollen at the base. *Stipules* lanceolate, acute, ciliate, entire. *Peduncles* short and thick, bent upwards, from 4 to 7 flowered. *Involucre* of from 6 to 10 widely lanceolate, acute, concave, keeled bractes. *Pedicles* longer than the nectariferous tube, about the length of the calyx. *Calyx* 5-cleft, segments widely lanceolate, acute, all reflexed when the flowers are expanded. *Nectariferous tube* a little shorter than the calyx, widely flattened and furrowed on each side. *Petals* 5, the two uppermost widely obovate, oblique at the base, of a bright purple colour, marked in the middle with blackish purple lines, which branch in all directions and are lightest on the outsides; lower petals oblongly obovate, of a lighter colour. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured.

Style purple, hairy below and smooth on the upper part. *Stigmas* 5, purple, reflexed.

We suspect this fine plant to be a hybrid production, but we cannot with any certainty refer to its origin: it might have been produced between *P. floridum* and *P. Beaufortiae*, or perhaps the latter with *P. cucullatum*. It is certainly a very desirable plant, as it is a free grower, an abundant bloomer, and as hardy as any in the genus. It thrives well in a mixture of turfy loam and peat, or any rich vegetable mould; and cuttings soon strike root if placed in a sheltered situation.

Our drawing was taken at the Nursery of Mr. Collivill, where several fine plants of it were in full bloom all the summer and till late in autumn.





E. D. Smith. del.

Pub. by J. Ridgway 170 Piccadilly May. 1. 1823.

J. Watts. sc.

PELARGONIUM quinquevulnerum.

Dark-flowered Stork's-bill.

P. quinquevulnerum, umbellis multifloris, foliis ternato-bipinnatifidis scabris : segmentis lineari-lanceolatis obtusis inciso-dentatis, petiolo communi inter pin-nas dentato, caule flexuoso suffruticoso, tubo nec-tarifero calyce reflexo sesquolongiori.

Pelargonium quinquevulnerum. *Pers. syn.* 2. p. 232.

Willd. enum. 2. p. 730. *Hort. sub. Lond.* p. 152.

n. 141. *Link. enum.* 2. p. 188.

Geranium quinquevulnerum. *Andrews's reposit.* 114.

Stem suffruticose, flexuose, rough and rugged, owing to the brown persistent stipules, not much branched; *branches* short, thickly clothed with unequal spreading hairs. *Leaves* ternate, bipinnatifid, very rough and hairy on both sides; segments linearly lanceolate, blunt, unequally cut and toothed, or sometimes entire. *Petioles* winged and toothed between the leaflets, very hairy. *Stipules* cordate or widely ovate, bluntish, but abruptly pointed. *Peduncles* cylindrical, much longer than the leaves, from 6 to 9 flowered, thickly covered with rigid spreading hairs, which make them rough to the touch. *Involucre* of about eight cordate or ovate acute bractes. *Pedicles* about the length of the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, all reflexed. *Nectariferous tube* flattened and furrowed on each side, about half as long again as the calyx. *Petals* 5, the two upper ones largest, obovately ligulate, the upper part of a deep velvet with lighter edges, the lower part whitish or pale blush, with two red lines from the base that are

slightly branched, between those are two or three linear or forked purplish spots : lower petals ligulate, nearly the same colour as the upper ones, but rather darker. *Filaments* 10, collected at the base, seven bearing anthers, upper one wide and flat like the others of this section. *Anthers* seldom perfect. *Style* very hairy, pale-coloured. *Stigmas* 5, red, reflexed.

The present very handsome plant is generally supposed to be a genuine species, but we have scarcely any doubt of its being a hybrid production, and intermediate between *P. triste* and *P. bicolor*, as in every respect it is as near as possible between the two; its flowers are more beautiful than either, but it seldom bears perfect anthers, another reason for believing it to be a mule. In the specimen from which our drawing was taken, the anthers were quite perfect, and the plant attempted to produce seed, but they all withered before they came to perfection.

It is rather more difficult to manage than most of its relatives, being very apt to look yellow and lose a great part of its leaves if it chances to get overwatered. The best soil for it is an equal mixture of turfy loam, peat, and sand, and the pots to be well drained with small potsherds. Cuttings strike root freely, planted in pots in the same kind of soil, and placed on a shelf in the greenhouse.

Drawn at the Nursery of Mr. Colvill, from a plant that flowered in autumn.



C. D. Smith. del.

Pub. by J. Ridgway 170 Piccadilly May. 1. 1823.

J. Watts. sc.

PELARGONIUM crenulatum.

Crenulate-leaved Stork's-bill.

P. crenulatum, pedunculis plurifloris, foliis inferioribus reniformibus obsolete crenulatis pubescentibus; superioribus cuneatis basi integerrimis apice crenatis, tubo nectarifero calyce duplo breviori.

Stem shrubby, erect, not much branched; *branches* thickly clothed with soft downy hairs. *Leaves* on the lower part of the plant very large, reniform, very shallowly notched with blunt rounded teeth, strongly nerved below, pubescent on both sides; on the flowering branches wedgeshaped, entire about half way from the base, and toothed at the points. *Petioles* widely flattened and furrowed on the upper side, convex on the lower, dilated at the base, thickly covered with soft villous hairs, as are the peduncles and calyx. *Stipules* cordate or widely ovate, obtuse, ciliate. *Peduncles* cylindrical, 5 or 6 flowered. *Involucre* of six bractes: *bractes* ovate, ending in a sharp point, fringed. *Pedicles* unequal in length, curved upwards. *Calyx* 5-cleft, segments lanceolate, acute, upper one largest, erect, the others reflexed. *Nectariferous tube* about half the length of the calyx, flattened on each side and gibbous at the base. *Petals* 5, the two upper ones obliquely obovate of a bright purple, with a dark crimson spot in the centre, which joins numerous lines from the base that are slightly branched, lower petals roundly ovate, of rather a lighter colour. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* red, hairy on the lower part and smooth on the upper. *Stigmas* 5, purple, reflexed.

This plant is, without doubt, of hybrid origin, and was raised from seed in the superb collection of Robert Henry Jenkinson, Esq. where our drawing was made. Its leaves are very large and slightly notched, so that we suspect it has been produced between a plant known in collections by the name of *P. generalissimum*, and another of the strong-growing sorts. It is a very hardy plant, thriving well in any light rich soil, and only requiring shelter from frost. Cuttings of it soon strike root, if placed in a sheltered situation.



G. D. Smith. del. Pub by J. Ridgway 170 Strand May 1. 1823.

J. Watts. sc.

DIMACRIA sulphurea.

Sulphur-coloured Dimacria.

D. sulphurea, acaulis, umbella composita, foliis pinnatis; foliolis oppositis alternisque 2-3natis 2-3fidisque: segmentis oblongo-lanceolatis dentatis acutiusculis, petalis concavis: superioribus refractis, inferioribus patentibus.

Root tuberous, branching a little below the crown. *Stem* none. *Leaves* erect, pinnate; *leaflets* opposite or alternate, either binate, ternate, or 2 to 3 cleft, thickly clothed with soft white hairs: segments oblong or lanceolate, deeply but unequally toothed, bluntish but ending abruptly in an acute point. *Petioles* flattened and furrowed on the upper side and convex on the lower, thickly covered with long white unequal hairs, as are the peduncles, calyx, and nectariferous tube. *Stipules* very long, joined to the base of the footstalks, points subulate and fringed. *Scape* branching, leafy at the base of the peduncles. *Peduncles* cylindrical, bearing many-flowered umbels, which spread in a radiate form. *Involucre* of numerous subulate fringed bractes. *Calyx* 5-cleft, segments lanceolate, reflexed. *Nectariferous tube* sessile, more than twice the length of the calyx, flattened and furrowed on each side. *Petals* 5, concave, of a bright sulphur-colour, the two upper ones connivent at the base, with spreading points and reflexed about the middle; just above that is a bright red spot, and below it are numerous short irregular purple lines. *Filaments* 10, connected at the base, five bearing anthers; the two lower ones much the longest, the upper one very short: *barren filaments* short, erect, and subulate.

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Pollen bright yellow. *Style* of a paler colour, pubescent. *Stigmas* 5, reflexed.

This is also a hybrid production, and was raised at the Nursery of Mr. Colvill, from a seed of *D. pinnata* that had been fertilized with the pollen of *Hoarea corydaliflora*. It is as near as possible intermediate between the two, but in habit approaches nearest to the latter. Several plants were raised from seeds at the same time, and scarcely vary in the least from each other. They are of very free growth and flower abundantly, and also ripen their seeds. Like the other tuberous-rooted kinds, they thrive best in an equal mixture of turfy loam, peat, and sand, only requiring water when growing freely. They may be readily increased by the little tubers of the roots, planted with their tops just above the surface: these require no water till the wound is callused over; they may then be watered regularly, and will soon make fine young plants.



Geranium sylv.

Printed by J. Ridgway 170 Piccadilly May 1. 1823.

J. Watts del.

PELARGONIUM Murrayanum.

Lord James Murray's Stork's-bill.

P. Murrayanum, umbellis multifloris, foliis cordatis 5-lobis undulatis inæqualiter denticulatis basi dilatatis, stipulis cordatis acutis ciliatis, floribus pedicellatis; petalis superioribus oblongo-obcordatis.

Pelargonium Murrayanum. Hortulanorum.

Stem tall, erect, branching; *branches* erect, thickly clothed with long villous hairs, as are the petioles, peduncles, and calyx. *Leaves* large, cordate, very broad at the base, 5-lobed, undulate, unequally toothed with small bluntish teeth, fringed, and hairy on both sides. *Petioles* flattened and furrowed on the upper side and convex on the lower, a little widened at the base. *Stipules* cordate, sharp-pointed, fringed, often toothed. *Peduncles* cylindrical, many-flowered. *Involucre* of several ovate, keeled, acute, villous bractes. *Pedicles* about the length of the bractes, villous. *Calyx* 5-cleft, segments oblongly lanceolate, bluntish. *Nectariferous tube* unequal in length, villous. *Petals* 5, the two upper ones oblongly obcordate, of a bright blush or lilac, marked in the centre with a dark purple spot, which joins several purple lines from the base, that branch in various directions; lower petals oblong, or broadly ligulate, of rather a paler colour. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Style* flesh-coloured, slightly hairy at the base and smooth upwards. *Stigmas* 5, reflexed.

We first received this plant from Messrs. Brown and Co. of Slough, under the name that we have adopted. At the time that we published *P. eximium*

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we suspected that they might both prove the same, having at that time only seen an imperfect specimen; but we are now convinced that they are very different, the present plant being much nearer allied to *P. oblatum*, from which it differs chiefly in its flowers being on longish footstalks and the petals of a different form; the leaves are also flatter, and the plant more erect. It was raised from seed by the gardener of Lord James Murray, and named by him in compliment to his Lordship. It certainly deserves to rank amongst the finest varieties, being a strong handsome-growing plant, an abundant bloomer, and continues in flower the greater part of the year: it is also as hardy as any of the genus, and thrives well in any rich light soil. Cuttings soon strike root, if placed in a shady situation.

In Mr. Colvill's collection some mules have been raised between the present plant and *P. ignescens*, and others between the latter and *P. Husseyanum*: these are expected to flower this summer, and we should expect them to surpass every thing of the kind that has yet been seen.



E. D. Smith. del.

Pub by J. Ridgway 170 Piccadilly June 1. 1829.

J. Watts. sc.

PELARGONIUM ternatum.

Ternate-leaved Stork's-bill.

P. ternatum, pedunculis subtrifloris, foliis ternatis cucullatis scabris: foliolis sessilibus cuneiformibus inciso-dentatis, calycibus reflexis, tubo nectarifero calyce sesquolongiori.

Pelargonium ternatum. Willden. *sp. pl.* 3. p. 685.
Botan. magaz. 413. *Pers. syn.* 2. p. 233. *Hort.*
Kew. ed. 2. v. 4. p. 181. *Jacq. ic. rar.* 3. t. 544.
Coll. 5. p. 135.

Geranium ternatum. Cavan. *diss.* 4. p. 255. t. 107.
 f. 2.

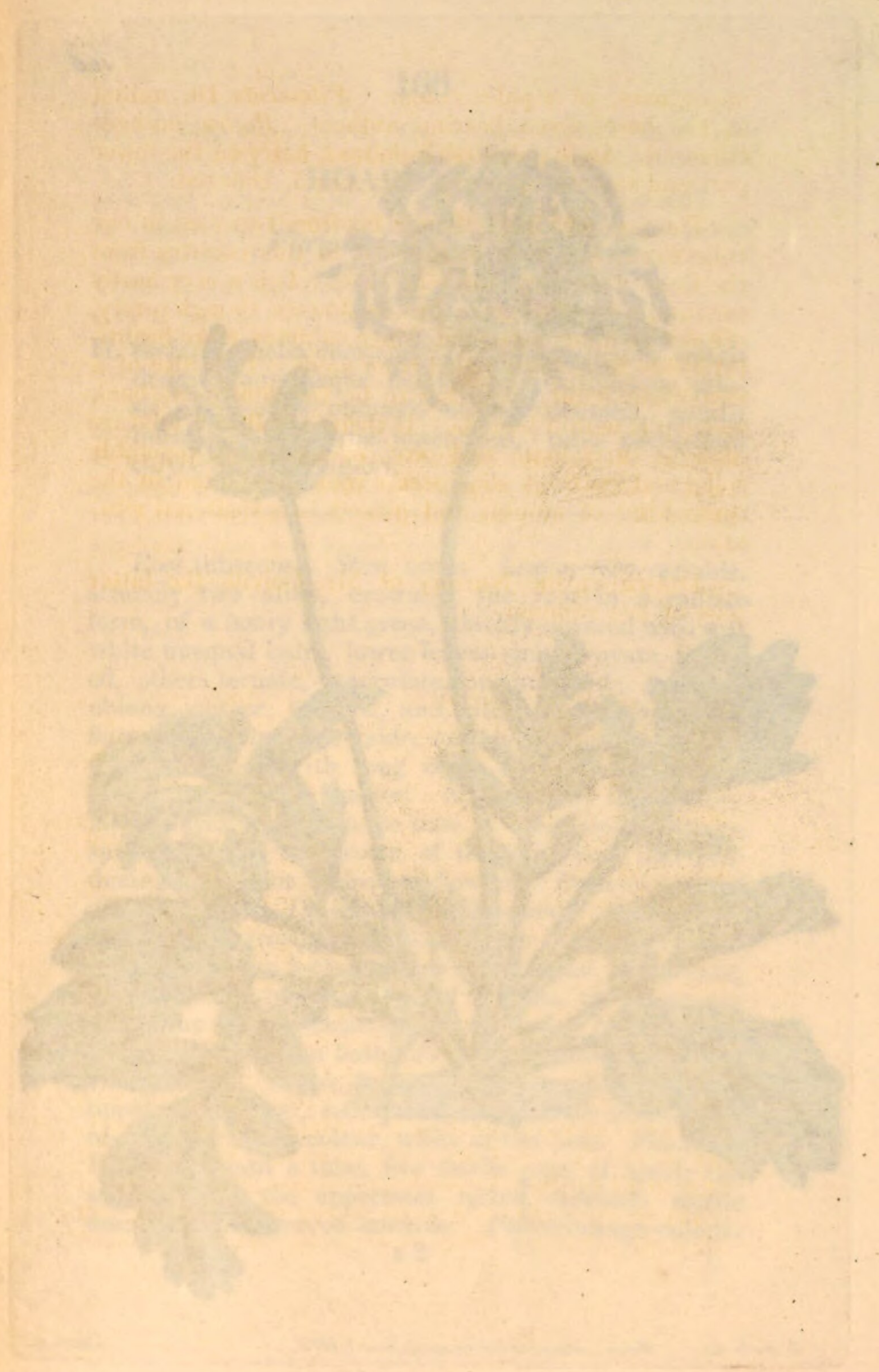
Stem shrubby, much branched; *branches* slender, rigid, of a reddish brown colour, thickly covered with short unequal spreading hairs, as are the petioles, peduncles, and calyx. *Leaves* distichous, ternate, concave, rough and rigid, slightly hairy on each side: *leaflets* sessile, wedge-shaped, cloven or deeply lobed, and sharply toothed with brown rigid unequal teeth. *Petioles* about the length of the leaf, flattened on the upper side and convex on the lower, a little widened at the base, of a brown colour. *Stipules* lanceolate, taper-pointed, sometimes toothed. *Peduncles* 2 or 3-flowered. *Involucre* of from 4 to 6 bractes, which are subulately linear and fringed. *Pedicles* about the length of the bractes. *Calyx* 5-cleft, segments lanceolate, acute, all reflexed. *Nectariferous tube* unequal in length, about half as long again as the calyx, flattened and furrowed on each side. *Petals* 5, the two upper ones widely spatulate, of a bright lilac, with two forked light purple lines near the base of each; lower petals spatulate, three times narrower than the

upper ones, of a paler colour. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Style* pale flesh-coloured, hairy on the lower part and smooth upwards. *Stigmas* 5, reflexed.

The present plant, though far from common in our collections, has been introduced to this country from the Cape ever since the year 1789. It is a very hardy sort and a free flowerer; but its flowers, though pretty, are not so much esteemed, since so many more beautiful kinds have been raised from seeds. It is also of a straggling habit, requiring to be frequently cut back to keep it within bounds. It thrives well in a mixture of light turfy loam and peat, or any light vegetable soil; and cuttings soon strike root, if planted in the same kind of mould, and placed in a sheltered situation.

Drawn at the Nursery of Mr. Colvill, the latter part of last summer.

Stem shrubby, much branched; branches slender, rigid, of a reddish brown colour, thickly covered with short unequal spreading hairs, as are the petioles, peduncles, and calyx. Leaves dichotomous, ternate, concave, rough, and rigid, slightly hairy on each side; leaflets sessile, wedge-shaped, cloven or deeply lobed, and sharply toothed with brown rigid unequal teeth. Petioles about the length of the leaf, flattened on the upper side and convex on the lower, a little widened at the base, of a brown colour. Stipules lanceolate, taper-pointed, sometimes toothed. Peduncles 2 or 3-flowered. involucres of from 4 to 6 bracts, which are subulately linear and fringed. Petioles about the length of the bracts. Calyx 5-lobed, segments lanceolate, acute, all reflexed. Ventrals 5, all unequal in length, about half as long again as the calyx, flattened and furrowed on each side. Petals 5, the two upper ones widely spatulate, of a bright lilac, with two forked light purple lines near the base of each; lower petals spatulate, three times narrower than the





C. D. Smith del.

Pub by J. Ridgway 170 Piccadilly June. 1823.

J. Walter sc.

HOAREA varia.

Various-leaved Hoarea.

H. varia, umbella composita, foliis simplicibus ovatis dentatis ternatisque laciniatis pinnatifidisque pilosis; segmentis oblongis obtusis dentatis, petalis linearibus undulatis patentibus, tubo nectarifero calyce parum longiori.

Root tuberous. *Stem* none. *Leaves* very variable, scarcely two alike, crowning the root in a radiate form, of a hoary light green, thickly covered with soft white unequal hairs, lower leaves simple, ovate, toothed, others ternate, lanceolate, or pinnatifid; *segments* oblong, obtuse, toothed, and ciliate. *Petioles* widely flattened on the upper side, and convex on the lower, thickly clothed with long white villous hairs, as are the peduncles and bractes. *Stipules* very long, subulately linear, joined to the base of the petioles. *Scape* springing from the crown of the root, leafy and producing numerous umbels of flowers. *Peduncles* cylindrical, hoary. *Umbels* many-flowered. *Involucre* of numerous narrowly lanceolate, taper-pointed, fringed bractes. *Calyx* 5-cleft, segments unequal, lanceolate, bluntish, with membranaceous margins, the upper one erect, the others reflexed. *Nectariferous tube* slightly curved, flattened on both sides, and clothed with short villous hairs. *Petals* 5, undulate, spreading, the two uppermost largest, reflexed from about the middle, all of a dull crimson colour, white at the base. *Filaments* 10, united into a tube, five fertile ones of nearly the same length, the uppermost rather shortest; sterile ones short and curved inwards. *Pollen* orange-colour-

ed. *Style* flesh-coloured, very hairy. *Stigmas* 5, of the same colour, reflexed.

This neat little plant is of hybrid origin, and was raised the year before last from seed, at the Nursery of Mr. Colvill. One of its parents was *H. melanantha*, the other we are not quite certain of; perhaps it might be *H. corydaliflora*. It is a very free grower and flowers abundantly, the flowers being produced in succession all the summer. Like all the others of the tuberous-rooted tribe, it succeeds best in an equal portion of turfy loam, peat, and sand, requiring no water when in a dormant state. The best method of propagating it is by the little tubers from the root, taken off close to the old one: these must be planted in the same sort of soil, with their tops just above the surface of the mould; they then require no water till the wound is dried up; after that they must be watered occasionally, but sparingly, till they begin to grow; they then require a constant supply. If the roots are buried altogether, they are very liable to rot, from the moisture settling on the wound.

at right angles to the surface of the water, and the same holds true of the air.

The next point to be considered is the question of the rate of diffusion. It is well known that the rate of diffusion is not the same in all cases, but that it varies with the nature of the medium through which the diffusion takes place. In the case of gases, the rate of diffusion is very rapid, and is almost independent of the nature of the medium. In the case of liquids, the rate of diffusion is much slower, and is greatly affected by the nature of the medium. In the case of solids, the rate of diffusion is still slower, and is almost independent of the nature of the medium. The rate of diffusion is also affected by the temperature of the medium, and by the concentration of the diffusing substance. In general, the rate of diffusion increases with increasing temperature and with increasing concentration of the diffusing substance.

The rate of diffusion is also affected by the size of the molecules of the diffusing substance. In general, the rate of diffusion decreases with increasing size of the molecules. This is because the larger molecules are more difficult to move through the medium. The rate of diffusion is also affected by the shape of the molecules. In general, the rate of diffusion is higher for spherical molecules than for elongated molecules. This is because the spherical molecules are more easily able to move through the medium.

The rate of diffusion is also affected by the nature of the medium. In general, the rate of diffusion is higher in liquids than in solids, and higher in gases than in liquids. This is because the molecules in liquids and gases are more free to move than the molecules in solids.



PELARGONIUM venustum.

Comely Stork's-bill.

P. venustum, pedunculis subpaniculatis 3-5-florisve, foliis reniformibus sublobatis denticulatis utrinque pilosis, stipulis cordatis ciliatis, calycibus reflexis, tubo nectarifero longitudine calycis.

Stem shrubby, erect, not much branched; *branches* short, thickly clothed with long white spreading hairs, as are the peduncles, calyx, and nectariferous tube. *Leaves* kidney-shaped, slightly lobed and toothed with very small pointed teeth, much veined underneath and furrowed above, covered on both sides with short white hairs. *Petioles* widely flattened and furrowed on the upper side and convex on the lower, thickly clothed with long spreading hairs. *Stipules* cordate, acute, fringed. *Peduncles* paniced, 3 to 5-flowered. *Involucre* of from 4 to 6 ovate bluntish bractes. *Pedicles* unequal in length, a little bent upwards. *Calyx* 5-cleft, segments reflexed or revolute, the upper one twice as wide as the others and ovate, the others lanceolate. *Nectariferous tube* about the length of the calyx, widely flattened on each side and gibbous at the base. *Petals* 5, the two upper ones roundly obovate, of a pale blush or nearly white, with a large velvety spot in the centre on a red ground and a few short purple lines below it and branching from it: lower petals oblong, nearly white. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Style* red, very hairy. *Stigmas* 5, red and revolute.

This beautiful plant is a hybrid production, and was raised at the Nursery of Mr. Colvill, from a seed

of *P. dumosum*, that had been fertilized with the pollen of one of the stronger-growing sorts, most probably *P. Gardneriæ*. It makes a snug compact bush, and produces a great number of flowers. It is as hardy as any other of the same tribe, thriving well in a mixture of sandy loam and peat, and continuing in bloom till late in autumn. Cuttings of it soon strike root, if planted in pots in the same kind of soil, and set on a shelf in the greenhouse.

Our drawing was taken at the Nursery of Mr. Colvill, from a plant that was in full bloom in July last.

Stem shrubby, erect, not much branched; branches short, thickly clothed with long white spreading hairs, as are the peduncles, calyx, and nectariferous tube. Leaves kidney-shaped, slightly lobed and toothed with very small pointed teeth, much veined underneath and furrowed above, covered on both sides with short white hairs. Petioles widely flattened and furrowed on the upper side and convex on the lower, thickly clothed with long spreading hairs. Stipules cordate, acute, fringed. Peduncles panicled, 3 to 5-flowered. Bracts of from 4 to 6 ovate bluish bracts. Petals unequal in length, a little bent upwards. Calyx 5-lobed, segments reflexed or revolute, the upper one twice as wide as the others and ovate, the others lanceolate. Nectariferous tube about the length of the calyx, widely flattened on each side and gibbous at the base. Petals 5, the two upper ones roundly obovate, of a pale bluish or nearly white, with a large velvety spot in the centre on a red ground and a few short purple lines below it and branching from it; lower petals oblong, nearly white. Stamens 10, united at the base, seven bearing anthers. Pollen orange-colored. Style red, very hairy. Stigma 5, red and revolute.

This beautiful plant is a hybrid production, and was raised at the Nursery of Mr. Colvill, from a seed

K. cuneata, Willd.

fil. cordata

fil. lobata

fil. ovata

fil. ovata

fil. ovata

fil. ovata

fil. ovata

fil. ovata

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fil. ovata



G. D. Smith. del. Pub. by J. Ridgway 170 Piccadilly June. 1. 1823.

J. Wallis sc.

PELARGONIUM tomentosum.

Penny-royal Stork's-bill.

P. tomentosum, umbellis multifloris subpaniculatis, foliis cordatis hastato-quinquelobis villosis mollissimis, tubo nectarifero calyce duplo breviori.

Pelargonium tomentosum. Willden. *sp. pl.* 3. p. 677. *Botan. magaz.* 518. *Jacq. ic. rar.* 3. t. 537. *Coll.* 5. p. 140. *Pers. syn.* 2. p. 232. *Hort. Kew. ed.* 2. v. 4. p. 177.

Stem shrubby, thick and succulent, much branched; *branches* widely spreading in all directions, thickly clothed with long villous hairs. *Leaves* cordate, subhastate, 5-lobed, unequally toothed with short rigid teeth, many-nerved, densely tomentose on each side. *Petioles* longer than the leaves, deeply furrowed on the upper side and rounded on the lower, thickly clothed with long shaggy hairs. *Stipules* cordate, acute, densely villous. *Umbels* many-flowered, generally panicled, divaricate. *Peduncles* cylindrical, villous, as are the calyx and bractes. *Involucre* of 6 or 7 ovate, acuminate, fringed bractes. *Pedicles* unequal in length, long and slender, spreading. *Calyx* 5-cleft, segments lanceolate, acute. *Nectariferous tube* about half the length of the calyx. *Petals* 5, the two upper ones oblongly obovate, white, with a red spot near the base; lower ones linearly spatulate, of the same colour. *Filaments* 10, united at the base, of a red colour, seven bearing anthers. *Pollen* orange-coloured. *Germen* and *aristæ* hairy. *Style* hairy. *Stigmas* 5, reflexed.

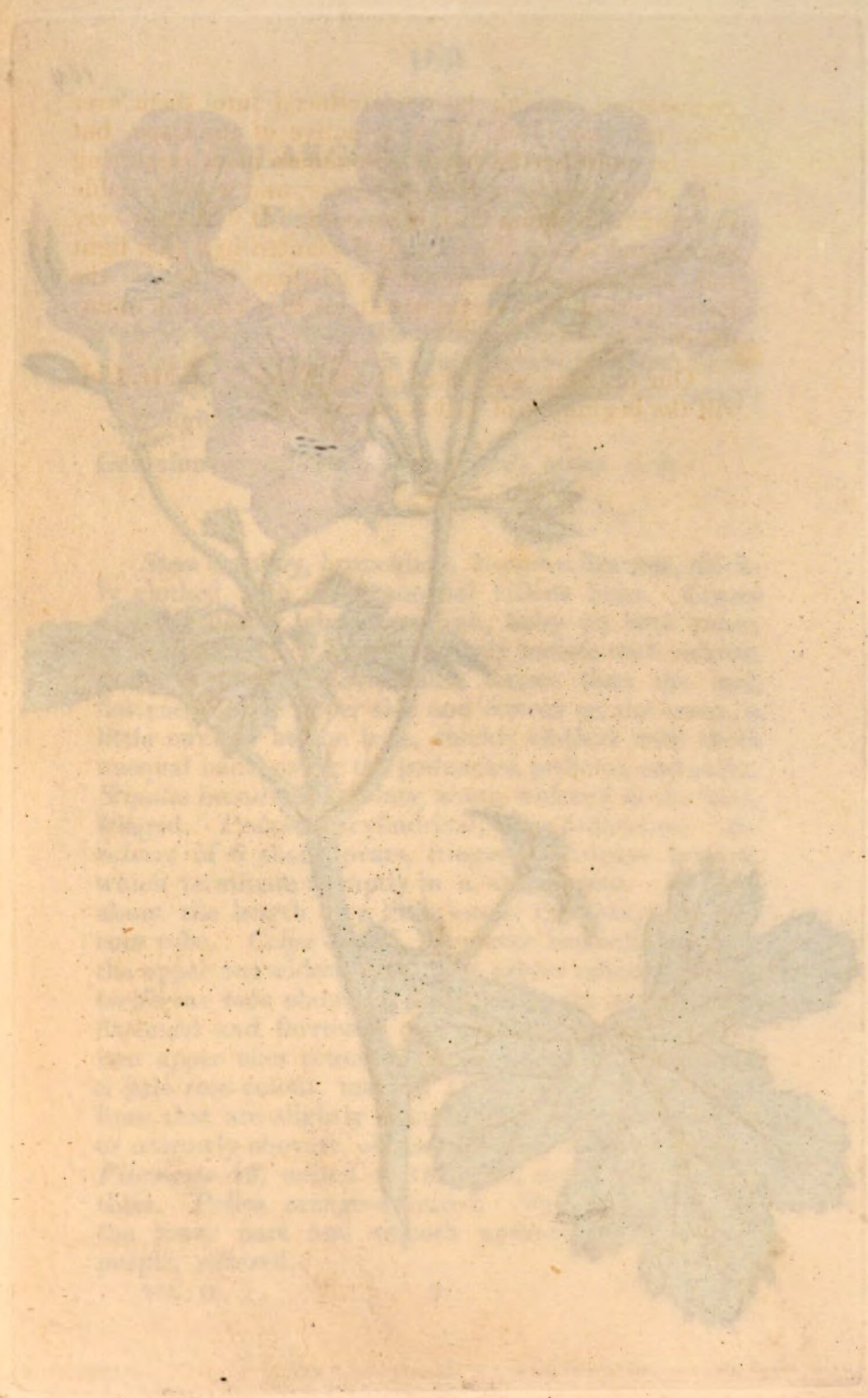
This plant, often known by the name of the Peppermint-scented Geranium, is an old inhabitant of our

greenhouses, having been introduced into them ever since the year 1790. It is a native of the Cape, but may be considered a hardy greenhouse plant, requiring only protection from frost in winter, and is more liable to suffer from damp than from cold. It will grow very strong and flower abundantly if planted in a rich light soil, and may be increased by cuttings or seeds: the latter method is to be preferred, as they ripen in abundance.

Our drawing was taken at the Nursery of Mr. Collivill the beginning of last summer.

Stem shrubby, thick and succulent, much branched; branches widely spreading in all directions, thickly clothed with long villous hairs. Leaves cordate, sub-baccate, 5-lobed, unequally toothed with short rigid teeth, many-nerved, densely tomentose on each side. Petioles longer than the leaves, deeply furrowed on the upper side and rounded on the lower, thickly clothed with long shaggy hairs. Stipules cordate, acute, densely villous. Umbels many-flowered, generally panicled, divaricate. Peduncles cylindrical, villous, as are the calyx and bracts. Bracts of 6 or 7 ovate, acuminate, fringed bracts. Petals 5, unequal in length, long and slender, spreading. Calyx 5-lobed, segments lanceolate, acute. Ventriflorous tube about half the length of the calyx. Petals 5, the two upper ones oblongly obovate, white, with a red spot near the base; lower ones linearly spatulate, of the same colour. Filaments 10, united at the base, of a red colour, seven bearing anthers. Pollen orange-coloured. Germen and style hairy. Stigma 5, reflexed.

This plant, often known by the name of the Pepper-mint-scented Geranium, is an old inhabitant of our





S. D. Smith del.

Pub by J. Ridgway 170 Piccadilly July 1. 1823.

J. Walley sc.

PELARGONIUM asperifolium.*Rough-leaved Stork's-bill.*

P. asperifolium, umbellis subquinquefloris, foliis cordatis profunde lobatis acute serratis utrinque hirtis, calycibus reflexis, tubo nectarifero calyce sesquilongiori.

Geranium asperifolium. *Andrews's geran. c. ic.*

Stem shrubby, branching; *branches* flexuose, thickly clothed with short unequal villous hairs. *Leaves* cordate, deeply lobed, roughish, hairy on both sides; lobes from 5 to 9, acute, sharply serrate with reddish brown edges. *Petioles* often longer than the leaf, flattened on the upper side and convex on the lower, a little swollen at the base, thickly clothed with short unequal hairs, as are the peduncles, pedicles, and calyx. *Stipules* broadly lanceolate, acute, widened at the base, fringed. *Peduncles* cylindrical, 4 or 5-flowered. *Involucre* of 6 short, ovate, fringed, imbricate bractes, which terminate abruptly in a sharp point. *Pedicles* about the length or a little longer than the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, acute, the upper one widest, erect, the others reflexed. *Nectariferous tube* about half as long again as the calyx, flattened and furrowed on each side. *Petals* 5, the two upper ones roundly obovate with long ungues, of a pale rose-colour, marked at the base with purplish lines that are slightly branched: lower petals oblong or narrowly obovate, obtuse, of rather a lighter colour. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Style* red, hairy on the lower part and smooth upwards. *Stigmas* 5, purple, reflexed.



D. Smith del.

Pub by J. Ridgway 170 Piccadilly July 1, 1823.

J. Walts. sc.

PELARGONIUM asperifolium.*Rough-leaved Stork's-bill.*

P. asperifolium, umbellis subquinquefloris, foliis cordatis profunde lobatis acute serratis utrinque hirtis, calycibus reflexis, tubo nectarifero calyce sesquilongiori.

Geranium asperifolium. *Andrews's geran. c. ic.*

Stem shrubby, branching; *branches* flexuose, thickly clothed with short unequal villous hairs. *Leaves* cordate, deeply lobed, roughish, hairy on both sides; lobes from 5 to 9, acute, sharply serrate with reddish brown edges. *Petioles* often longer than the leaf, flattened on the upper side and convex on the lower, a little swollen at the base, thickly clothed with short unequal hairs, as are the peduncles, pedicles, and calyx. *Stipules* broadly lanceolate, acute, widened at the base, fringed. *Peduncles* cylindrical, 4 or 5-flowered. *Involucre* of 6 short, ovate, fringed, imbricate bractes, which terminate abruptly in a sharp point. *Pedicles* about the length or a little longer than the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, acute, the upper one widest, erect, the others reflexed. *Nectariferous tube* about half as long again as the calyx, flattened and furrowed on each side. *Petals* 5, the two upper ones roundly obovate with long ungues, of a pale rose-colour, marked at the base with purplish lines that are slightly branched: lower petals oblong or narrowly obovate, obtuse, of rather a lighter colour. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Style* red, hairy on the lower part and smooth upwards. *Stigmas* 5, purple, reflexed.

We are not certain of the origin of the present plant, nor can we determine whether it is a genuine species or a hybrid production. Mr. Andrews supposes it to be a real species. If of hybrid origin, we should suppose one of its parents to be *P. grandiflorum*, and the other *P. Beaufortiae* or *P. obtusilobum*. It is now less frequently met with in collections than it was some years back; so many handsome new varieties having sprung up, has occasioned it to be somewhat neglected: but it is nevertheless a very ornamental plant, and a good bloomer; it is also as hardy as any of its tribe, and thrives well in a mixture of turfy loam and peat, or any other rich vegetable mould, producing its flowers all the summer and till late in autumn. Cuttings strike root readily, if planted in pots and placed in a shady situation.

Drawn at the Nursery of Mr. Colvill in October last.

ly clothed with short unguis villos hairs. V. lobes from 5 to 9, acute, sharply serrate with reddish brown edges. Petioles often longer than the leaf, flattened on the upper side and convex on the lower, a little swollen at the base, thickly clothed with short unguis hairs, as are the peduncles, pedicels, and calyx. Stipules broadly lanceolate, acute, widened at the base, fringed. Peduncles cylindrical, 4 or 5-flowered. Leaves of 6 short, ovate, fringed, imbricate bracts, which terminate abruptly in a sharp point. Petioles about the length of a little longer than the petioles. Calyx 5-lobed, segments lanceolate, acute, the upper one widest, erect, the others reflexed. V. two-tube about half as long again as the calyx, flattened and furrowed on each side. V. lobes 5, the two upper ones broadly ovate with long angles, of a pale rose-colour, marked at the base with purplish lines that are slightly branched: lower petals oblong, or narrowly ovate, of rather a lighter colour. Filaments 10, united at the base, seven bearing anthers. Pollen orange-coloured. Style red, hairy on the lower part and smooth upwards. Stigma 3-lobed, purple, reflexed.





G. D. Smith del.

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J. Walts. sc.

PELARGONIUM cruentum.

Blood-red Stork's-bill.

P. cruentum, acaule, umbellis compositis multifloris, foliis pinnatifido-laciniatis pilosis; segmentis oblongo-spatulatis obtusis dentatis, petalis patentibus inferioribus linearibus, tubo nectarifero calyce duplo longiori.

Pelargonium cruentum. Nobis in Colv. catal. ed. 2. p. 22. col. 2.

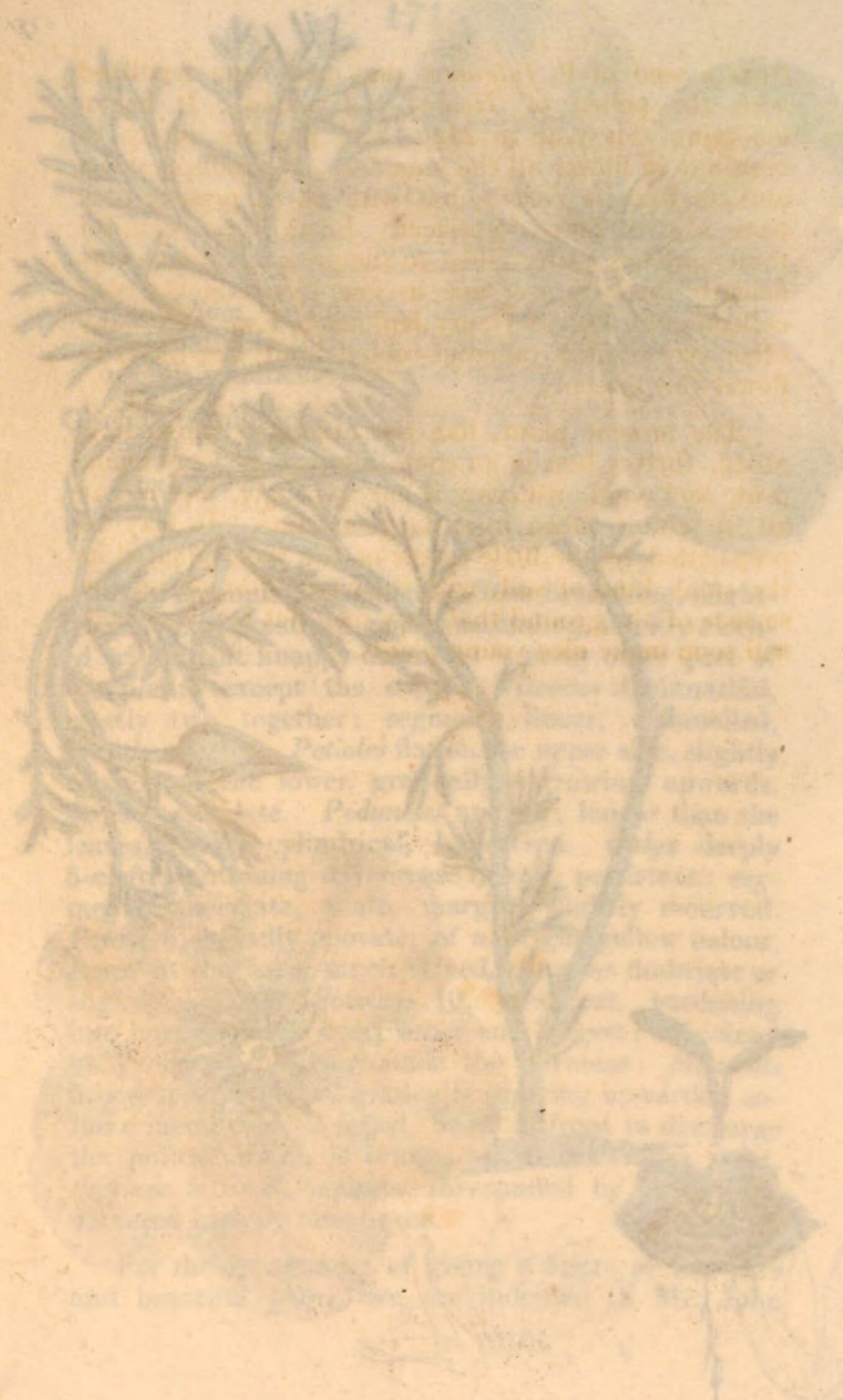
Root tuberous, scaly. *Stem* none or very short. *Leaves* pinnatifid or deeply lacinate, hairy on both sides: segments oblong or spatulate, very obtuse, and toothed with very blunt rounded teeth. *Petioles* flattened on the upper side and convex on the lower, widened at the base, thickly clothed with soft villous hairs, as are the peduncles, calyx, and nectariferous tube. *Stipules* lanceolate, acute, villous, joined to the base of the petiole. *Scape* branching, leafy, producing several umbels of flowers. *Umbels* many-flowered. *Involucre* of numerous lanceolate, acute, fringed bractes. *Pedicles* very short, not half the length of the bractes. *Calyx* 5-cleft, segments lanceolate, bluntish, fringed, spreading. *Nectariferous tube* about twice the length of the calyx. *Petals* 5, of a bright crimson, shaded with a darker colour: upper ones three times broader than the lower ones, distinct at the base; lower ones linear, channelled, spreading. *Filaments* 10, united into a tube, seven bearing anthers. *Germen* and *aristæ* villous. *Style* hairy at the base and smooth upwards. *Stigmas* 5, purple, reflexed.

This elegant little plant is of hybrid origin, and was raised last year at the Nursery of Mr. Colvill,

from a seed of *P. fulgidum* that had been fertilized with the pollen of *Hoarea melanantha*. It began blooming this year in May, and appears likely to continue in flower all the summer. It produces seven anthers like its parent, but with us at present they have always been imperfect. Some very beautiful mule varieties nearly allied to the present, though sufficiently distinct, are now in fine bloom in the rich collection of Robert Henry Jenkinson, Esq. and many other very curious tuberous-rooted kinds are likely to flower this season.

The present plant, like the others to which it is allied, thrives best in an equal mixture of turfy loam, peat, and sand, watering it but sparingly, and not at all in winter, when in a dormant state. It may be propagated by the little tubers of the root, planted in the same kind of soil, with their tops just above the surface of the ground that they may not rot, and they will soon make nice young plants.

This elegant little plant is of hybrid origin, and was raised last year at the Nursery of Mr. Colvill.





C. D. Smith del.

Pub by J. Ridgway 170 Piccadilly July 1. 1823.

J. Watts sc.

GRIELUM tenuifolium.*Slender-leaved Grielum.*

G. tenuifolium, pedunculis unifloris axillaribus, foliis bipinnatifidis incanis; segmentis linearibus acutiusculis canaliculatis, caule ramoso diffuso.

Grielum tenuifolium. *Willden. sp. pl.* 2. p. 771. *Pers. syn.* 1. p. 513. *Hort. Kew. ed.* 2. v. 3. p. 116. *Lamarck. ill.* t. 388.

Root perennial, succulent. *Stem* branching, slightly succulent, prostrate, points ascending, thickly clothed with a soft knappy down, as is every other part of the plant, except the corolla. *Leaves* bipinnatifid, mostly two together; segments linear, channelled, bluntly pointed. *Petioles* flat on the upper side, slightly convex on the lower, gradually narrowing upwards. *Stipules* subulate. *Peduncles* axillary, longer than the leaves, nearly cylindrical, 1-flowered. *Calyx* deeply 5-cleft, continuing to increase in size, persistent: segments lanceolate, acute, margins slightly recurved. *Petals* 5, broadly obovate, of a bright yellow colour, green at the base, much veined, margins fimbriate or slightly jagged. *Stamens* 10, persistent, hardening into horny spines; every other one longest; all joined to a crown that surrounds the germens: *filaments* broadest at the base, gradually tapering upwards: *anthers* incumbent, 2-celled, burst in front to discharge the pollen, which is orange-coloured. *Styles* short. *Stigmas* 5 to 8, capitate, surrounded by a white 5-cornered knappy membrane.

For the opportunity of giving a figure of this rare and beautiful plant, we are indebted to Mr. John

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Miller, of the Bristol Nursery, who was so kind as to send it to us about the middle of May, just as the flower was expanding. We had long wished for a sight of the plant in bloom, but were never gratified with it before, and only knew what it was likely to be by examining fine preserved specimens of it in Mr. Brown's Herbarium, where there are also specimens of another species deposited. The size and colour of the flower remind us of *Ceanothus macrocarpa*, which it much resembles.

It is rather a difficult plant to preserve through the winter, being very liable to be injured by too much moisture; and it cannot bear confinement in too warm a temperature, but prefers a dry airy part of the greenhouse, and must be planted in a light loose soil. An equal mixture of turfy loam, peat, and sand, will suit it well, or any other very light earth. Mr. Brown was so kind as to examine Mr. Masson's manuscripts, to let us know in what kind of soil it grew at the Cape; he mentions having found it growing in sandy or gravelly situations.

a. Calyx. b. The same split open, showing the insertion of the Stamens and Pistils. c. Capsule, showing the persistent Stamens, with the young plant sprouted from the Capsule, and the root growing from below it. All natural size.





PELARGONIUM fragrans.

Nutmeg-scented Stork's-bill.

P. fragrans, pedunculis multifloris subpaniculatis, foliis subrotundo-cordatis subtrilobis obtuse dentatis mollissimis, caule erecto fruticoso; ramis divaricato-deflexis, petalis superioribus minoribus, tubo nectarifero calyce sesquilongiori.

Pelargonium fragrans. Willd. Hort. Ber. 2. t. 77.
Enum. 2. p. 701. Hort. sub. lond. 151. Link
enum. 2. p. 187.

Geranium odoratissimum, erectum. Andrews's Geran.
c. ic.

Stem shrubby, erect, covered with a brown scaly bark, very much branched; *branches* spreading, often bent downwards, occasioned by the weight of the numerous leaves and flowers, thickly clothed with a short mealy pubescence. *Leaves* roundly cordate, generally 3-lobed, bluntly toothed or crenate, strongly veined underneath, densely clothed with a soft short mealy pubescence. *Petioles* longer than the leaves, widest at the base and gradually tapering upwards; flattened on the upper side and convex on the lower, thickly clothed with a dense mealy pubescence, as are the peduncles and calyx. *Stipules* cordate, acute, ciliate. *Peduncles* generally in panicles, cylindrical, bearing umbels of many flowers. *Involucre* of numerous unequal, ovate or lanceolate, acute, keeled bractes. *Pedicles* unequal, some about the length of the nectariferous tube, others much shorter. *Calyx* 5-cleft, segments broadly lanceolate, acute, upper segment erect, the others reflexed. *Nectariferous tube* about half as long again as the calyx, flattened on each side and gibbous

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at the base, villous. *Petals* 5, the two upper ones smallest, ligulate, slightly emarginate, white, marked with two red lines from about the middle that are slightly branched; lower petals obovate, or broadly spatulate. *Filaments* 10, united at the base, seven bearing anthers. *Germen* feathered. *Style* smooth. *Stigmas* 5, red, reflexed.

The present plant, generally known by the name of the *Nutmeg-scented Geranium*, is an old inhabitant of our greenhouses. Willdenow describes it as a genuine species, and makes it a native of the Cape of Good Hope; but we are inclined to suppose it of hybrid origin, and believe it to be the produce of *P. odoratissimum* fertilized by the pollen of *P. exstipulatum*, as it is as near as possible intermediate between the two; and Mr. Jenkinson has raised a very curious mule of the same tribe from *P. australe* mixed with *P. incisum*.

Our drawing was taken from a plant at the Nursery of Mr. Colvill, where it continues in bloom the greater part of the year. The scent of its leaves is by some persons considered very fragrant, whilst others have a strong dislike to it. It thrives well in a mixture of sandy loam and peat, or any other light soil; and cuttings soon strike root if placed in a sheltered situation.





PELARGONIUM *coruscans*.

Glittering Stork's-bill.

P. coruscans, umbellis plurifloris, foliis cordatis sublobatis inæqualiter acute dentatis utrinque pubescentibus, petalis undulatis reflexis, tubo nectarifero calyce multo breviori.

Pelargonium coruscans. Hoare MSS. *Colv. catal.*
ed. 2. p. 22. col. 3.

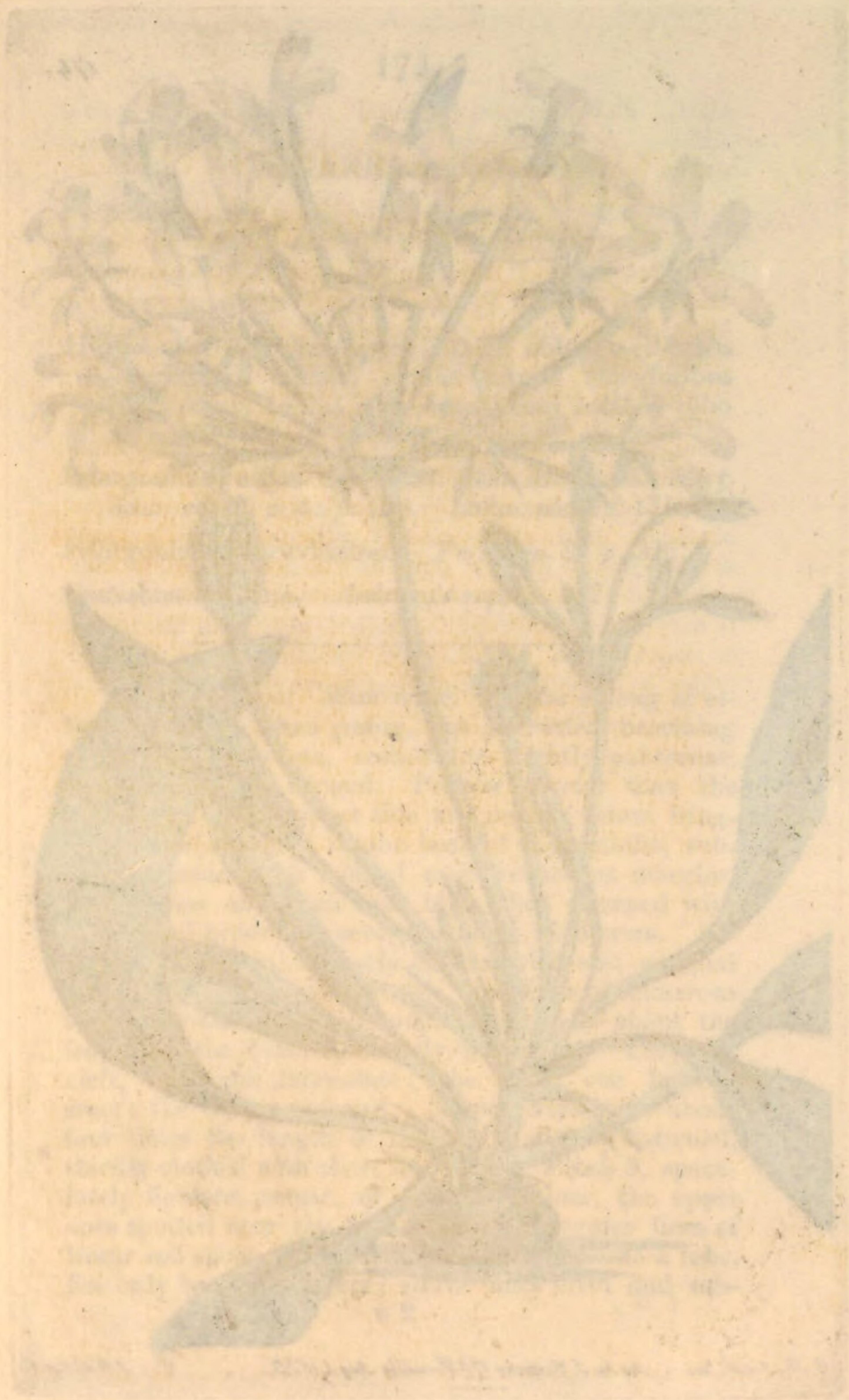
Stem shrubby, much branched; *branches* short, slender, nearly upright or a little spreading, thickly clothed with very unequal spreading villous hairs, as are the petioles, peduncles, and calyx. *Leaves* slightly cordate, upper ones ovate, often shallowly lobed, particularly the lower ones, very unequally and sharply toothed, pubescent on both sides, strongly nerved underneath, of a pale green colour. *Petioles* long and slender, flattened on the upper side and convex on the lower, widened at the base. *Stipules* variable, some cordate, others ovate or lanceolate, entire or rarely toothed, fringed, some bluntish, others pointed. *Peduncles* long and slender, reaching far beyond the leaves, often bent or crooked. *Umbels* 3 to 5-flowered. *Involucre* of six short, lanceolate, acute, fringed bractes. *Pedicles* long and slender, twice the length of the nectariferous tube. *Calyx* 5-cleft, segments long, lanceolate, taper-pointed. *Nectariferous tube* much shorter than the calyx. *Petals* 5, a little twisted, the two upper ones broadly obovate, oblique at the base, of a rosy lilac with a dark spot in the centre and numerous dark lines from the base that branch in various directions; lower petals oblong or nearly obovate, of a lighter colour. *Filaments* 10, connected at the base,

seven bearing anthers. *Style* red, very hairy. *Stigmas* 5, twisted and reflexed.

The plant from which our drawing was taken was sent to us some time since by Sir R. C. Hoare, who informed us that he raised it from seed. We believe that Mr. Davey also received it from him about the same time, although he has been selling it as a production of his own, under the name of *Lady Clinton*. We certainly do not believe that it was ever produced from seeds at Mr. Davey's, as his *Pelargoniums* are all of such a different tribe, that we should never expect to see any thing like the present produced from them; and, as we always wish to give the credit of the raising a new plant to the person who really produced it, that is the reason of our mentioning it here.

The present subject is a very handsome plant, and continues in bloom the greater part of the year. It is of hybrid origin, but we cannot trace its parents with any certainty; one of them is likely to be *P. concinnum*, the other we can at present have no guess at. It thrives well with us in a mixture of sandy loam and peat; and cuttings strike root freely, if planted in pots and placed on a shelf in the greenhouse.

leaves, often bent or crooked. Leaves 3 to 5 flowered. Pedicels long and slender, reaching far beyond the flowers, often bent or crooked. Calyx 5-lobed, segments long, lanceolate, taper-pointed. Ventriflexure tube much shorter than the calyx. Petals 5, a little twisted, the two upper ones broadly obovate, oblique at the base, of a rosy lilac with a dark spot in the centre and numerous dark lines from the base that branch in various directions; lower petals oblong or nearly obovate, of a lighter colour. Filaments 10, connected at the base,





C. D. Smith del.

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J. Watts sc.

HOAREA radicata.

Fleshy fringed-leaved Hoarea.

H. radicata, umbella simplici, foliis oblongo-ellipticis integerrimis ciliatis, petalis retusis superioribus basi macula duplici interrupte lineari notatis, tubo nectarifero calyce quadruplo longiori.

Pelargonium radicum. *Vent. Hort. Malm.* 65. *Hort. Kew. ed. 2. v. 4. p. 160.* *Botan. magaz.* 1718.

Pelargonium concavifolium. *Pers. syn. 2. p. 226.*

Geranium ciliatum. *Andrews's reposit.* 247.

Root tuberous. *Stem* none. *Leaves* oblong or elliptic, concave when young, but afterwards becoming convex and revolute, smooth or slightly pubescent, entire; margins fringed. *Petioles* shorter than the leaves, flat on the upper side and convex below, fringed. *Stipules* joined to the base of the petioles, subulately linear, with fringed membranaceous margins. *Flower-stem* about an inch high, then crowned with leaves and producing several umbels of flowers. *Peduncle* cylindrical, densely clothed with soft unequal hairs. *Umbels* many-flowered. *Involucre* of numerous subulately-linear fringed bractes. *Pedicles* about the length of the bractes, densely pubescent. *Calyx* 5-cleft, segments lanceolate; the upper one largest, erect; the others reflexed. *Nectariferous tube* about four times the length of the calyx, slightly flattened, thickly clothed with short soft hairs. *Petals* 5, spatulately ligulate, retuse, of a cream colour, the upper ones spotted near the base with two irregular lines of linear red spots. *Filaments* 10, connected into a tube, five only bearing anthers; sterile ones erect and sub-

ulate. *Pollen* cream-coloured. *Germen* and *aristæ* villous. *Style* slightly hairy below and smooth upwards. *Stigmas* 5, slightly reflexed.

This elegant little species has long been an inhabitant of our greenhouses, though it is now far from being common. It has generally passed in our gardens under the name of *P. ciliatum*, having been figured by Mr. Andrews under that name; but it is quite different from the *P. ciliatum* of L'Héritier, whose plant is generally adopted. Like the rest of the tuberous-rooted tribe, it thrives well in an equal mixture of turfy loam, peat, and sand, leaving it quite dry all the time it is dormant. If kept in a warmish situation, it will begin to grow about Christmas, when it should be repotted in fresh soil, and a little water given it; and as it begins to grow it must be watered regularly, but only when it is quite dry, and never over the leaves. It may be increased by the little tubers from the roots, or from seeds, which ripen in abundance if some pollen be attached to the stigmas when in bloom.

Drawn at the Nursery of Mr. Colvill in May last.



Phlox paniculata L. var. *grandis* (Muhl.) B.S.P. in fruit.



G. D. Smith. del.

Pub by J. Ridgway 170 Piccadilly Aug. 1. 1823.

S. Watts. sculp.

PELARGONIUM Wellsianum.

Mr. Wells's Stork's-bill.

P. Wellsianum, umbellis plurifloris, foliis inferioribus cordatis quinquelobis obtusis inæqualiter dentatis planis: superioribus trilobis incisive acutis, calycibus reflexis, tubo nectarifero calyce sesquilon-
giori.

Pelargonium Wellsianum. *Colv. catal. ed. 2. p. 22.*
col. 2.

Stem shrubby, erect, branched; *branches* spreading, thickly clothed with long spreading villous hairs, as are the petioles, peduncles, bractes, and calyx. *Leaves* flat, cordate, thickly covered with hairs on both sides; lower ones 5-lobed, obtuse, unequally toothed with bluntish teeth, strongly nerved underneath; upper ones sharply 3-lobed or incised, acute, deeply and sharply toothed. *Petioles* flattened on the upper side and convex on the lower, dilated at the base. *Stipules* cordate, oblique, taper-pointed. *Peduncles* cylindrical, points curved upwards. *Umbels* several-flowered. *Involucre* of six unequal lanceolate acute bractes. *Pedicles* short, curved upwards. *Calyx* 5-cleft, segments lanceolate, acute, reflexed. *Nectariferous tube* about half as long again as the calyx, flattened on both sides. *Petals* 5, the two upper ones oblong, oblique at the base, of a bright orangy scarlet, tinged and edged with purple, with a large dark spot in the centre, and numerous lines from the base that branch in various directions; lower petals obovate, or broadly spatulate, dependent, a little lighter than the upper ones. *Stamens* 10, united at the base, seven bearing anthers. *Style* long, flesh-coloured, slightly hairy at the base and smooth upwards. *Stigmas* 5, purple, reflexed.

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This splendid plant is one of those mentioned by us in a former number, the produce of *P. Husseyanum*, fertilized by the pollen of *P. ignescens*. Its brilliancy and richness of colour surpasses any that we have hitherto seen, and no artificial colouring can come any way near to the original; very different from what we lately saw in an advertisement, where it is stated that the figures were so highly flattered, that they were not to be known, which any person, who will give himself the trouble to compare with the originals, will soon find to be quite the reverse, if the plants are in good health and the flowers perfect, in which state we always choose our plants for drawing, and in that state they may be seen at Mr. Colvill's Nursery. It is very well for any person to say that the figures are flattered, if he wish to sell an inferior kind of plant for the sort that is wanted, which is a very common practice, but a very bad one.

This beautiful plant was raised from seed last year, at the Nursery of Mr. Colvill. We have named it, in compliment to William Wells, Esq. of Redleaf, near Tunbridge, Kent, a liberal and an extensive cultivator of ornamental plants, and to whom our gardens are indebted for many choice plants introduced by him from China and other countries.

The same mode of treatment as is recommended for *P. ignescens*, and others of that tribe, is also suitable to the present plant.





C. D. Smith. del.

Pub. by J. Ridgway 170 Piccadilly Aug. 1. 1823.

J. Watts. sc.

CICONIUM cerinum.

Wax-flowered Ciconium.

C. cerinum, umbellis multifloris, foliis rotundato-reniformibus obsolete crenulatis nervosis pubescentibus mollissimis, stipulis cordatis subdentatis, caule erecto, petalis obovatis superioribus minoribus, tubo nectarifero calyce duplo longiori.

Pelargonium cerinum. Colv. catal. p. 22. col. 3.

Ciconium cerinum. Colv. catal. ed. 2. p. 21. col. 1.

Stem erect, shrubby, not much branched; *branches* erect, thickly clothed with short soft villous hairs. *Leaves* roundly reniform, scarcely undulate, slightly crenulate, strongly nerved, thickly covered on both sides with a thick soft pubescence, which gives them a soft velvety feel. *Petioles* flattened and furrowed on the upper side and convex on the lower, a little widened at the base, very thickly clothed with short soft villous hairs, as are the peduncles and nectariferous tube. *Stipules* very large, cordate, acute, sometimes toothed, pubescent. *Peduncles* solitary, cylindrical, a little swollen at the base. *Umbels* many-flowered. *Involucre* of numerous, unequal, concave bractes, some cordate, others lanceolate, acute, thickly clothed with long villous hairs, as are the segments of the calyx. *Pedicles* very short, about half the length of the bractes. *Calyx* 5-cleft, segments lanceolate, concave, fringed. *Nectariferous tube* more than double the length of the calyx, flattened and furrowed on each side. *Petals* 5, obovate, of a bright pink, having a waxy appearance, the two uppermost smallest. *Filaments* 10, short and erect, united at the base, some-

times all bearing perfect anthers. *Pollen* orange-coloured. *Style* short, smooth. *Stigmas* 5, reflexed.

We first received this plant from Robert Henry Jenkinson, Esq. who we believe raised it from seed. It differs from most others in its number of perfect stamens: we have often found all ten perfect, and frequently eight and nine. We suspect it is of hybrid origin, or it may be a genuine species. It is a very desirable plant amongst others, as its colour is different from most, being of a light waxy appearance. It is of easy culture, requiring a rich light soil, or a mixture of loam and peat will suit it very well, watering it but sparingly in winter, as it is of a succulent habit. Cuttings soon strike root, if planted in pots and placed in a sheltered situation.



This drawing was taken from a specimen of the plant which was
sent to me by Mr. Smith, collector of the Herbarium of London
and is a very good specimen of the plant.



Hibiscus *mutabilis* *var.*

Pub. by J. Ridgway 170 Piccadilly Sep^r. 1. 1823.

J. Walton.

PELARGONIUM ramulosum.

Small-branched Stork's-bill.

P. ramulosum, pedunculis bifloris, foliis cordatis cuneatisque subtrilobis dentatis, caule ramosissimo; ramis debilibus patentibus, calycibus reflexis, tubo nectarifero calyce parum longiori.

Stem shrubby, erect, very much branched; *branches* very slender, spreading, thickly clothed with white spreading unequal hairs, as are the petioles, peduncles, and calyx. *Leaves* small, some cordate others cuneate, generally 3-lobed, unequally and sharply toothed, hairy on both sides. *Petioles* slender, flattened on the upper side and convex on the lower. *Stipules* small, lanceolate, acute, dilated at the base, fringed. *Peduncles* long and slender, cylindrical, generally 2-flowered. *Involucre* of from four to six small unequal fringed bractes, some ovate, others lanceolate, acute. *Pedicles* about the length of the nectariferous tube, villous. *Calyx* 5-cleft; segments lanceolate, acute, reflexed. *Nectariferous tube* a little longer than the calyx, flattened on each side, gibbous at the base. *Petals* 5, the two upper ones ovate, white or pale blush, with a dark velvety spot in the centre, stained all round with red, and from it branch a few lines in various directions; lower petals spatulate or broadly ligulate, slightly undulate, white tinged with blush. *Filaments* 10, connected at the base, seven bearing anthers. *Germen* villous. *Style* very hairy. *Stigmas* 5, red, fringed and revolute.

Our drawing was taken from a plant that we received from Mr. Smith, gardener at the Earl of Liverpool's, Coombe Wood, where it was raised from seed.

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It is of hybrid origin, but we cannot speak of its parents with any certainty: one of them might be *P. dumosum*, and the other related to *P. maculatum*. It is a very free grower and an abundant bloomer; and, from its numerous branches, it is always a bushy plant. Although the flowers are produced only singly or in pairs on the stem, yet their abundance makes up for that deficiency. It thrives well in a mixture of turfy loam, peat, and sand; and cuttings strike root readily, if planted in pots in the same kind of soil, and placed in a sheltered situation.

Stems shrubby, erect, very much branched; branches very slender, spreading, thickly clothed with white spreading unequal hairs, as are the petioles, bractlets, and calyx. Leaves small, some entire others cuneate, generally 3-lobed, unequally and sharply toothed, hairy on both sides. Petioles slender, flattened on the upper side and convex on the lower. Bractlets small, lanceolate, acute, dilated at the base, fringed. Peduncles long and slender, cylindrical, generally 2-flowered. involucres of from four to six small unequal fringed bractlets, some ovate, others lanceolate, acute. Pedicels about the length of the nectariferous tube, villous. Calyx 5-lobed; segments lanceolate, acute, reflexed. Nectary-tube a little longer than the calyx, flattened on each side, gibbous at the base. Petals 5, the two upper ones ovate, white or pale blush, with a dark velvety spot in the centre, stained all round with red; and from it branch a few lines in various directions; lower petals spatulate or broadly ligulate, slightly undulate, white tinged with blush. Stamens 10, connected at the base, seven bearing anthers. Germen villous. Style very hairy. Stigma 3, red, fringed and revolute.

Our drawing was taken from a plant that we received from Mr. Smith, gardener at the Earl of Devon's, Coombe Wood, where it was raised from seed.

The first of these is the *Andropogon scoparius* L. which is a very common plant in the fields and pastures of the country. It is a tall, slender plant with a single stem and a few small, narrow leaves. The flowers are small and white, and are arranged in a loose, terminal panicle. The plant is very hardy and grows well in poor soil.

The second of these is the *Andropogon furcatus* L. which is a very common plant in the fields and pastures of the country. It is a tall, slender plant with a single stem and a few small, narrow leaves. The flowers are small and white, and are arranged in a loose, terminal panicle. The plant is very hardy and grows well in poor soil.

The third of these is the *Andropogon scoparius* L. which is a very common plant in the fields and pastures of the country. It is a tall, slender plant with a single stem and a few small, narrow leaves. The flowers are small and white, and are arranged in a loose, terminal panicle. The plant is very hardy and grows well in poor soil.

The fourth of these is the *Andropogon furcatus* L. which is a very common plant in the fields and pastures of the country. It is a tall, slender plant with a single stem and a few small, narrow leaves. The flowers are small and white, and are arranged in a loose, terminal panicle. The plant is very hardy and grows well in poor soil.



D. Smith. del.

Sub by J. Ridgway 170 Piccadilly Sept. 1. 1823.

S. Watts. sc.

PELARGONIUM Fairlieæ.

Mrs. Fairlie's Stork's-bill.

P. Fairlieæ, umbellis plurifloris, foliis reniformibus trilobis undulatis dentatis, stipulis lanceolatis acuminatis subdentatis, calycibus reflexis, tubo nectarifero longitudine calycis.

Pelargonium Fairlieæ. Colv. catal. ed. 2. p. 22. col. 3.

Stem shrubby, erect, much branched; *branches* slender, erect, of a purplish colour, thickly clothed with short white unequal spreading hairs, as are the petioles, peduncles, and calyx. *Leaves* small, reniform, deeply 3-lobed, undulate, unequally toothed, underneath much veined, fragrant; lobes broadly cuneate, spreading. *Petioles* slender, flattened and furrowed on the upper side and convex on the lower, a little thickened at the base. *Stipules* small, lanceolate, taper-pointed, sometimes toothed and ciliate, reflexed. *Peduncles* cylindrical, several-flowered. *Pedicles* about the length of the nectariferous tube, slightly hairy. *Calyx* 5-cleft; segments lanceolate, taper-pointed, reflexed. *Nectariferous tube* about the length of the calyx, flattened on each side and gibbous at the base. *Petals* 5, of a pale rosy lilac; the two upper ones obovate, oblique at the base, with a white spot in the centre, and a purple one above it, and from the base are two purple lines which are slightly branched; lower ones oblong, obtuse. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Germen* and *aristæ* villous. *Style* red, slightly hairy at the base and smooth upwards. *Stigmas* 5, purple, reflexed.

This pretty plant, we are informed, has been lately received from Paris, where it has been cultivated for some years past. We suspect it to be of hybrid origin, but what its parents are we cannot at present determine. We first met with it at the Nursery of Mr. Tate, in Sloane Street, Chelsea, where our drawing was made last summer. We are informed that it is known by the name of *P. venustum* in the French collections; but as we believe it has not been published, either by that or any other name, and as we have already published a *P. venustum*, we have adopted the name by which we received it, in compliment to Mrs. Fairlie, of Ware Park, Herts, a great admirer and extensive cultivator of plants. It is rather late in coming into flower, and may be considered as one of the autumn bloomers, at which time it is all covered with flowers, that make a pleasing appearance, particularly as the colour is so different from most others. It is of easy culture, thriving well in a mixture of sandy loam and peat, or other light vegetable soil; and cuttings soon strike root, if planted in pots and placed in a sheltered situation.

Stems erect, branched, woody at base, pubescent, the lower part of the stem and the branches spreading, the leaves pinnatifid, lobed, shortish blunt teeth, beneath with a shortish serrated, rounded, nodulate.

Nelapogon

vol. 1.

Root

smaller tubercles, the branches spreading, the leaves pinnatifid, lobed, shortish blunt teeth, beneath with a shortish serrated, rounded, nodulate.

Stems erect, branched, woody at base, pubescent, the lower part of the stem and the branches spreading, the leaves pinnatifid, lobed, shortish blunt teeth, beneath with a shortish serrated, rounded, nodulate.

Nelapogon



C. D. Smith del.

Publ by J. Ridgway 170 Piccadilly Sep^r 1. 1823.

J. Watts sc.

PELARGONIUM glauciifolium.

Horn-Poppy-leaved Stork's-bill.

P. glauciifolium. subcaulescens, umbellis multifloris, scapo folioso, foliis ternatis pinnatifidis lobatisve sinuatis inæqualiter obtuse dentatis glaucescentibus subtus tomentosis, calycibus reflexis, tubo nectarifero calyce quadruplo longiori.

Pelargonium glauciifolium. *Colv. catal. ed. 2. p. 22. col. 1.*

Root tuberous, large, and branching into other smaller tubers. *Stem* suffruticose, branching a little; *branches* spreading. *Leaves* of various forms, ternate, pinnatifid, lobate or sinuate, unequally toothed with shortish blunt teeth, rather glaucous and clothed underneath with a short dense wool; lobes blunt and rounded, undulate. *Petioles* thick, slightly flattened on the upper side and rounded on the lower; thickly clothed with villous hairs, as are the peduncles and calyx. *Stipules* large, cordate or ovate, acute. *Scape* leafy, producing three or four peduncles, which are very long, bearing umbels of many flowers. *Involucre* of several lanceolate acute concave bractes. *Pedicles* shorter than the bractes. *Calyx* 5-cleft, segments unequal, oblong or lanceolate, obtuse. *Nectariferous tube* slender, gradually attenuated downwards, flattened and channelled on each side; about four times as long as the calyx. *Petals* 5, all obovate, the two upper ones rather largest, of a beautiful dark velvet, edged with a greenish yellow. *Filaments* 10, erect, six bearing anthers, besides a large spatula-shaped one, as in the rest of this section. *Pollen* yellow. *Style* short, hairy on the lower part and smooth upwards. *Stigmas* 5, reflexed.

The present handsome and very curious plant is a hybrid production, and was raised from seed in the collection of R. H. Jenkinson, Esq.; its parents are *P. gibbosum* and *P. lobatum*, and it is, as near as possible, intermediate between them; its flowers are exquisitely fragrant, their fragrance beginning about five or six o'clock in the evening, and continuing till about nine the next morning; it appears to be a very free grower, and flowers nearly all the summer and till late in the autumn; like others of the succulent and tuberous-rooted tribe, it requires but little water, and the best soil for it is an equal mixture of turfy loam, peat, and sand. Cuttings of it strike root freely; it may also be increased by the little tubers of the roots.

col. I.

Root tuberous, large, and branching into other smaller tubers. Stems succulent, branching a little; branches spreading. Leaves of various forms, ternate, pinnatifid, lobate or sinuate, unequally toothed with shortish blunt teeth, rather glaucous and clothed underneath with a short dense wool; lobes blunt and rounded, undulate. Petioles thick, slightly flattened on the upper side and rounded on the lower; thickly clothed with villous hairs, as are the peduncles and calyx. Sepals large, cordate or ovate, acute. Scape hairy, producing three or four peduncles, which are very long, bearing umbels of many flowers. Anthers of several lanceolate acute concave bristles. Pedicels shorter than the bristles. Calyx 5-lobed, segments unequal, oblong or lanceolate, obtuse. Vestiture of the tube slender, gradually attenuated downwards, flattened and channelled on each side; about four times as long as the calyx. Petals 5, all obovate, the two upper ones rather largest, of a beautiful dark velvet edged with a greenish yellow. Filaments 10, erect, six bearing anthers, besides a large spatula-shaped one, as in the rest of the section. Flower yellow. Style short, hairy on the lower part and smooth upwards. Stigma 5, reflexed.



The plant is a perennial herb, growing in various parts of the country. It is a very common plant, and is often found in the fields and meadows. The leaves are large and lobed, and the flowers are small and light-colored. The plant is very hardy, and can withstand a great deal of frost. It is a very useful plant, and is often used in the kitchen. The leaves are very tender, and can be used in a variety of ways. The flowers are also very useful, and can be used in a variety of ways. The plant is a very beautiful plant, and is a great addition to any garden.



D. Smith del.

Pub. by J. Ridgway 17, O Piccadilly Sept. 1. 1823.

J. Watts sc.

PELARGONIUM flexuosum.

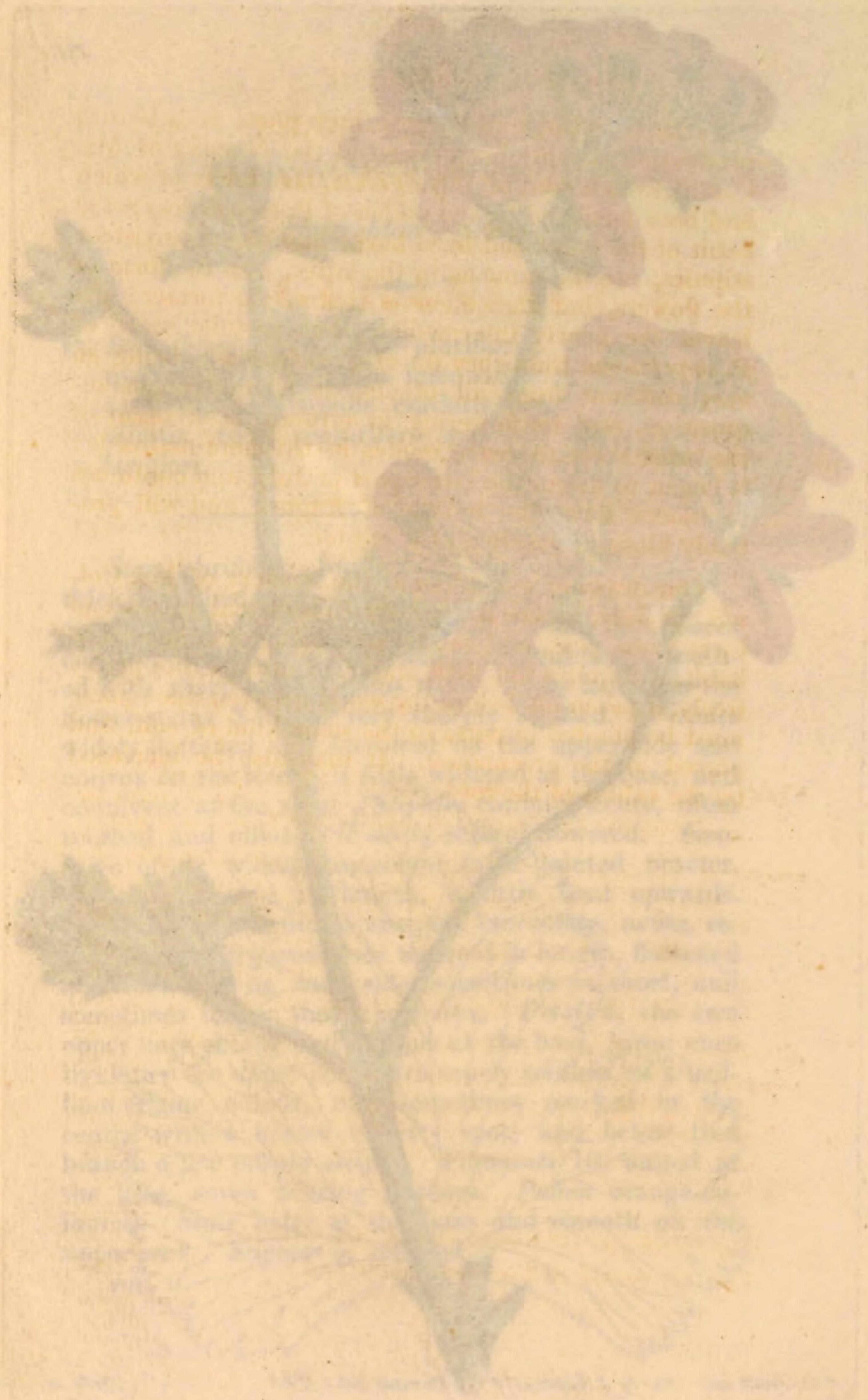
Zigzag-stalked Stork's-bill.

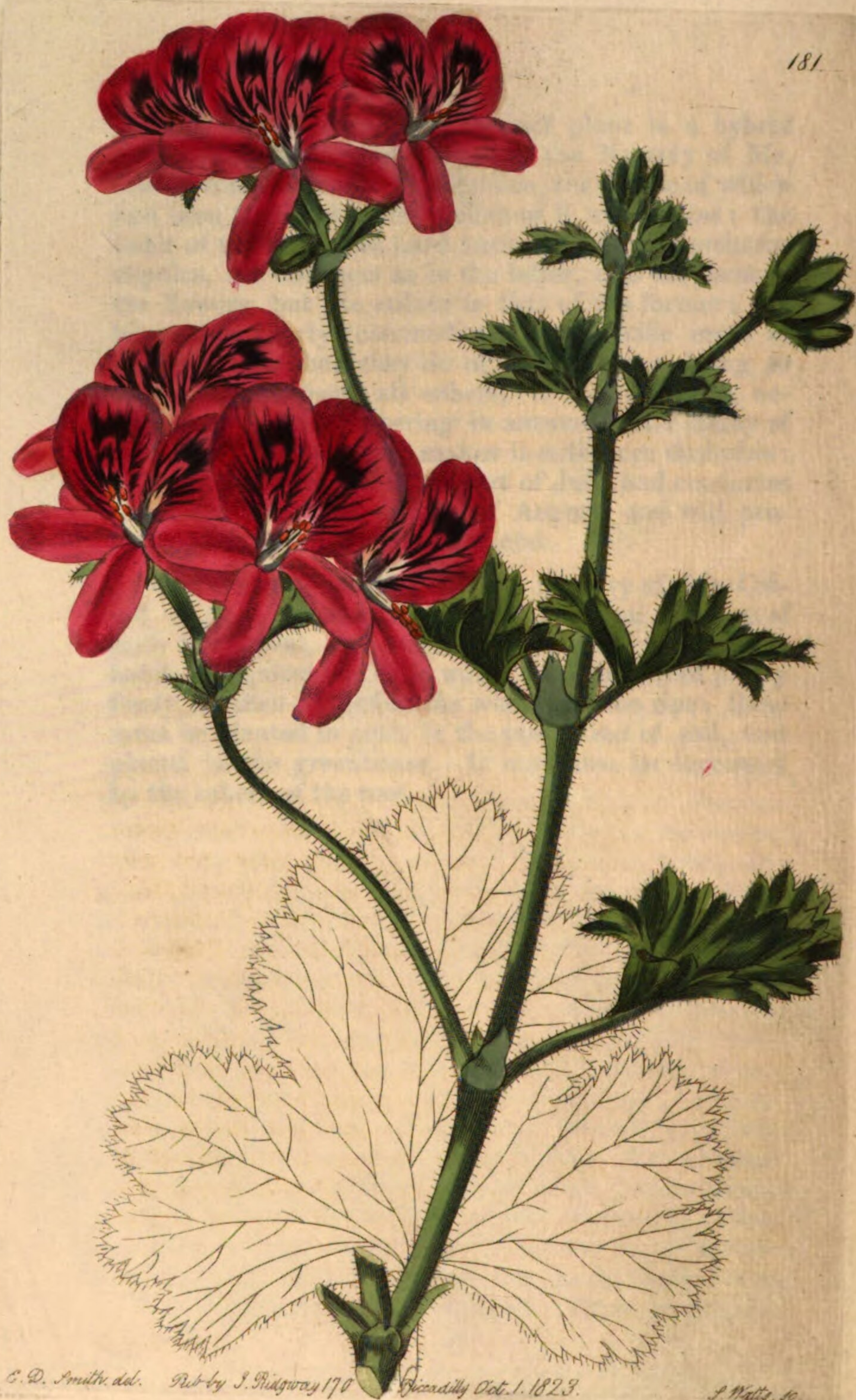
P. flexuosum, umbellis multifloris subpaniculatis, foliis cordato-ovatis incisis dentatis subtus tomentosis, stipulis lanceolatis acutis subpersistentibus, caule crasso flexuoso, tubo nectarifero calyce triplo longiori.

Stem shrubby, succulent, hard, and brittle, flexuose, scarcely branching. *Leaves* cordately ovate, deeply and unequally incised, and toothed with blunt rounded teeth, tomentose underneath and strongly nerved: when young, hollowed on the upper side, afterwards becoming flat. *Petioles* flattened on the upper side and rounded on the lower, swollen at the base, and covered with a short downy pubescence, as are the peduncles and calyx. *Stipules* lanceolate, taper-pointed, partly remaining persistent, when they turn of a brown horn-colour. *Peduncles* many-flowered, in a kind of panicle terminating the stem. *Involucre* of from six to eight linear, pointed bractes. *Pedicles* short, scarcely half the length of the bractes. *Calyx* 5-cleft, segments lanceolate, fringed, all reflexed. *Nectariferous tube* about three times the length of the calyx, flattened and furrowed on each side, pubescent. *Petals* 5, spreading, the two upper ones obovate, of an orangy scarlet, and from the base branch numerous lines in various directions: lower petals ligulate of the same colour, each marked with a dark spot. *Filaments* 10, united into a tube, seven bearing anthers, which in our specimens have always been without pollen. *Style* short, red, slightly hairy at the base and smooth upwards. *Stigmas* 5, revolute.

This beautiful and very distinct plant is a hybrid production, having been raised at the Nursery of Mr. Colvill from a seed of *P. fulgidum*, the flower of which had been fertilized by the pollen of *P. sæpeflorens*: the habit of the plant and hard bark, and its subsistent stipules, are the same as in the latter, also the form of the flowers, but the colour is that of the former; the leaves are nearly intermediate, but partake more of *P. sæpeflorens* than they do of *P. fulgidum*: being so very different from all others, it is a valuable acquisition, and its flowering in autumn, after many of the other sorts are over, makes it still more desirable: it began to flower the latter part of July, and continues to bloom now, the middle of August, and will probably blossom nearly all the winter.

Our drawing was taken at the Nursery of Mr. Colvill, in July, where it is grown in an equal mixture of turfy loam, peat, and sand; and, being of a succulent habit, it requires but little water. Cuttings root pretty freely, if taken off before the wood gets too ripe; these must be planted in pots, in the same kind of soil, and placed in the greenhouse. It may also be increased by the tubers of the root.





C.D. Smith del.

Pub. by J. Ridgway 170

Piccadilly Oct. 1. 1823.

J. Watts sc.

PELARGONIUM Broughtoniæ.

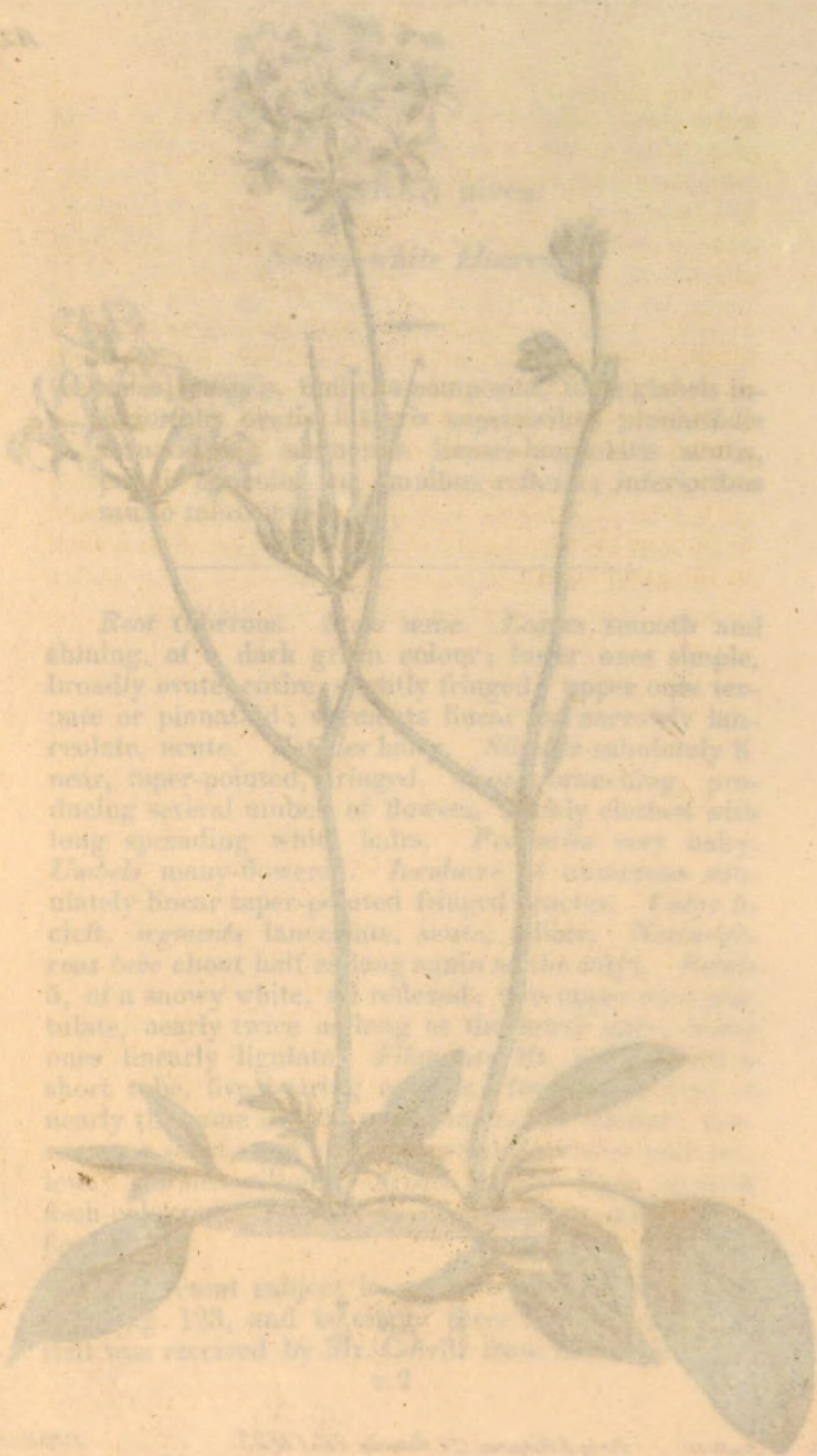
Lady Broughton's Stork's-bill.

P. Broughtoniæ, umbellis plurifloris, foliis cordatis quinquelobis undulatis inæqualiter grosseque dentatis rigidis, stipulis cordatis acutis subdentatis ciliatis, tubo nectarifero inæquali calyce parum longiori.

Stem shrubby, branching; *branches* spreading, thickly clothed with soft villous unequal hairs, as is every other part of the plant except the corolla. *Leaves* cordate, 5-lobed, undulate, unequally and deeply toothed with sharp cartilaginous teeth: upper leaves on the flower-stems 3-lobed, very sharply toothed. *Petioles* widely flattened and furrowed on the upper side and convex on the lower, a little widened at the base, and connivent at the apex. *Stipules* cordate, acute, often toothed and ciliate. *Umbels* several-flowered. *Involucre* of six widely lanceolate taper-pointed bractes. *Pedicles* unequal in length, a little bent upwards. *Calyx* 5-cleft, segments unequal, lanceolate, acute, reflexed. *Nectariferous tube* unequal in length, flattened and furrowed on each side, sometimes as short, and sometimes longer than the calyx. *Petals* 5, the two upper ones oblong and oblique at the base, lower ones ligulate; the upper petals are nearly veinless, of a brilliant flame colour, and sometimes marked in the centre with a brown velvety spot, and below that branch a few purple stripes. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Style* hairy at the base and smooth on the upper part. *Stigmas* 5, reflexed.

This beautiful plant is a hybrid production, and was raised at the Nursery of Mr. Colvill, from a seed of *P. rubescens* that was fertilized by the pollen of *P. ignescens*. We have named it in compliment to Lady Broughton, of Hoole, near Chester, a great admirer of, and an extensive cultivator of Geraniaceæ and other plants, and an encourager of botanical science.

The present subject is a very handsome-growing plant, and continues to bloom all the summer and till late in autumn: it also grows very freely, and appears to be more hardy than most others to which it is related. It thrives well in an equal mixture of turfy loam, peat, and sand, and only requires watering when quite dry. Cuttings of it strike root freely, if planted in pots in the same kind of soil, and placed on a shelf in the greenhouse.



Root tuberous. Leaves smooth and shining, of a dark green color; lower ones simple, broadly ovate-lanceolate, slightly fringed; upper ones ternate or pinnate; segments linear-lanceolate, acute, serrate. Inflorescence a dense, branched cyme. Flowers small, tubular, nearly twice as long as the calyx, of a snowy white, 2-lipped. The lower lip is nearly twice as long as the upper, and is deeply lobed. The fruit is a small, globose capsule, nearly twice as long as the calyx, of a snowy white, 2-lipped. The lower lip is nearly twice as long as the upper, and is deeply lobed. The fruit is a small, globose capsule, nearly twice as long as the calyx, of a snowy white, 2-lipped.

123, and 124. The plant was received by Dr. C. C. Smith from the same source.



C. D. Smith del.

Publ by J. Ridgway 170 Piccadilly Oct. 1. 1823.

S. Watts. sc.

HOAREA nivea.

Snowy-white Hoarea.

H. nivea, acaulis, umbella composita, foliis glabris inferioribus ovatis integris superioribus pinnatifidis ternatisque: segmentis lineari-lanceolatis acutis, petalis concoloribus omnibus reflexis; inferioribus multo minoribus.

Root tuberous. *Stem* none. *Leaves* smooth and shining, of a dark green colour; lower ones simple, broadly ovate, entire, slightly fringed; upper ones ternate or pinnatifid; segments linear or narrowly lanceolate, acute. *Petioles* hairy. *Stipules* subulately linear, taper-pointed, fringed. *Scape* branching, producing several umbels of flowers, thickly clothed with long spreading white hairs. *Peduncles* very hairy. *Umbels* many-flowered. *Involucre* of numerous subulately linear taper-pointed fringed bractes. *Calyx* 5-cleft, segments lanceolate, acute, ciliate, *Nectariferous tube* about half as long again as the calyx. *Petals* 5, of a snowy white, all reflexed; two upper ones spatulate, nearly twice as long as the lower ones; lower ones linearly ligulate. *Filaments* 10, united into a short tube, five bearing anthers; four lower ones of nearly the same length, upper one rather shorter: barren ones short, and curved inwards. *Pollen* pale yellow. *Germen* villous. *Aristæ* hairy. *Style* smooth, flesh-coloured. *Stigmas* 5, of the same colour, reflexed.

The present subject is a near relative of *H. violæflora*, fig. 123, and is one of those mentioned by us, that was received by Mr. Colvill from the Cape at the

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same time. This differs materially from that, in being altogether a much smaller plant, and stemless; its leaves are also very dissimilar, and its flowers smaller. We believe it to be a genuine species; and although its flowers are not so showy as many others, yet their singularity makes them desirable, particularly their being of a pure white, so unusual in this tribe of plants. Like its relatives, it succeeds best in an equal mixture of turfy loam, peat, and sand; and the pots must be well drained with small potsherds, that the wet may pass off readily. After flowering, and as soon as they become dormant, they require no more water, till they show an inclination to grow afresh, when they should be repotted in fresh soil and watered regularly. They may be increased by the little tubers of the root, or by seeds, which ripen in abundance, if some pollen be applied to the stigmas when in full bloom.



E. D. Smith del.

Pub. by J. Ridgway 170 Piccadilly Oct 1 1823

J. Watts sculp.

PELARGONIUM tyrianthinum.

Royal purple Stork's-bill.

P. tyrianthinum, umbellis plurifloris, foliis planis cordatis quinquelobis denticulatis villosis mollibus subtus multinerviis, stipulis obliquis acutis subdentatis, petalis superioribus rotundatis reflexis, tubo nectarifero longitudine calycis.

More's Princess of Denmark Geranium. *Hortulanorum.*

Stem shrubby, much branched; *branches* spreading, thickly clothed with long spreading villous hairs, as are the petioles, peduncles, and calyx. *Leaves* flat, cordate, shallowly 5-lobed, and toothed with small pointed teeth; villous, very soft to the touch, feeling like cloth: nerves numerous underneath, branching in all directions. *Petioles* flattened on the upper side and convex on the lower, dilated at the base. *Stipules* ovate, oblique, taper-pointed and fringed. *Peduncles* numerous, several-flowered. *Involucre* of six or seven short, ovate, acute, fringed bractes, keeled underneath. *Pedicles* about the length of the nectariferous tube. *Calyx* 5-cleft, segments unequal, some ovate, others lanceolate, acute, of a brownish purple colour, upper one erect, the others reflexed. *Petals* 5, of a bright rosy purple; upper ones nearly round, a little waved, and marked near the base with a few short, branched, dark lines; lower petals oblong or obovate, slightly waved. *Filaments* 10, united at the base, seven bearing anthers. *Style* red, smooth, and shining. *Stigmas* 5, reflexed.

This pretty abundant flowering plant is of hybrid origin, and was raised from seed by Mr. More, of the

King's Road, Chelsea, where our drawing was taken. We cannot ascertain its parents at present, as it is very distinct from any with which we are acquainted. It is a very desirable plant, as it is covered with flowers all the summer, and, if kept cut back a little, it will bloom till late in autumn. It is also very hardy, requiring only a common greenhouse or warm room to preserve it through the winter. It grows freely in a mixture of loam and peat, or any light vegetable soil; and cuttings strike root readily, if planted in pots, and placed in a sheltered situation.

More's Princess of Denmark Geranium. *Geranium*.

Stems shrubby, much branched; branches spreading, thickly clothed with long spreading villous hairs, as are the petioles, peduncles, and calyx. Leaves flat, cordate, shallowly 5-lobed, and toothed with small pointed teeth; villous, very soft to the touch, feeling like cloth; nerves numerous underneath, branching in all directions. Petioles flattened on the upper side and convex on the lower, dilated at the base. Stipules ovate, oblique, taper-pointed and fringed. Peduncles numerous, several-flowered. Anthers of six or seven short, ovate, acute, fringed bracts, beaked underneath. Pedicels about the length of the nectariferous tube. Calyx 5-lobed, segments unequal, some ovate, others lanceolate, acute, of a brownish purple colour, upper one erect, the others reflexed. Petals 5, of a bright rose purple; upper ones nearly round, a little waved, and marked near the base with a few short, branched, dark lines; lower petals oblong or obovate, slightly waved. Filaments 10, united at the base, seven bearing anthers. Style red, smooth, and shining. Stigma 5, reflexed.

This pretty abundant flowering plant is of hybrid origin, and was raised from seed by Mr. More, of the



C. D. Smith. del.

Pub. by J. Ridgway 170 Piccadilly Oct. 1. 1823.

J. Watts. sc.

PELARGONIUM acutilobum.

Sharp-lobed Stork's-bill.

P. acutilobum, pedunculis paucifloris, foliis planis oblongo-lanceolatis serratis glabris: inferioribus acute lobatis, superioribus lanceolatis, stipulis lanceolatis acuminatis, tubo nectarifero calyce duplo longiori.

Stem shrubby, branching; *branches* spreading, thickly clothed with short white hairs, as are the petioles, peduncles, calyx, and the nerves of the leaves. *Leaves* flat, cuneate at the base, oblongly lanceolate, acute, serrate, glossy: *lower ones* more or less lobed; lobes sharp-pointed, serrated, the middle one much the longest, but not so pointed: *upper leaves* lanceolate, sharply serrated. *Petioles* flattened and furrowed on the upper side and convex on the lower. *Stipules* lanceolate, taper-pointed. *Peduncles* few-flowered. *Involucre* of four or five linearly lanceolate taper-pointed bractes. *Pedicles* about the length of the bractes. *Calyx* 5-cleft, segments unequal, lanceolate, taper-pointed, the upper one largest, erect, the others reflexed. *Nectariferous tube* about double the length of the calyx, flattened on each side and gibbous at the base, thickly clothed with short hairs. *Petals* 5, unguiculate, the two upper ones obovate, oblique, white or pale blush, with a large dark obovate patch in the centre and a few lines branching from it: lower ones spatulately ligulate, white or pale blush. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Style* very hairy about half way up, the upper part smooth. *Stigmas* 5, red, reflexed.

Our drawing of this plant was taken at the Nursery of Messrs. Allen and Co. of the Union Nursery,

in the King's Road, where it was raised from seed. It is of hybrid origin, and is related to *P. lanceolatum* and *P. glaucoides*: it also bears some affinity to *P. penicillatum*; but we cannot determine its parents with any certainty. It seems to be of free growth, and continues in bloom for a length of time; and as it is so dissimilar from most others, it makes a pleasing variety. It will thrive well in a mixture of light loam and peat, or any other rich vegetable soil, and appears to be as hardy as any of the genus. Cuttings of it will strike root readily, if planted in pots and placed in a sheltered situation.

Stems simple, branching; branches spreading, thickly clothed with short white hairs, as are the petioles, peduncles, calyx, and the nerves of the leaves. Leaves flat, cuneate at the base, oblongly lanceolate, acute, serrate, glossy: lower ones more or less lobed; lobes sharply pointed, serrated, the middle one much the longest, but not so pointed; upper leaves lanceolate, sharply serrated. Petioles flattened and furrowed on the upper side and convex on the lower. Stipules lanceolate, taper-pointed. Peduncles few-flowered. Flowers of four or five linearly lanceolate taper-pointed bracts. Pedicels about the length of the bracts. Calyx 5-lobed, segments unequal, lanceolate, taper-pointed, the upper one largest, erect, the others reflexed. Nectary-tube twice about double the length of the calyx, flattened on each side and gibbous at the base, thickly clothed with short hairs. Petals 5, unguiculate, the 2 upper ones obovate, oblique, white or pale pink, with a large dark obovate patch in the centre and a few lines branching from it: lower ones spatulate-ligulate, white or pale pink. Filaments 10, united at the base, exerted, bearing anthers. Pollen orange-coloured. Style very hairy about half way up, the upper part smooth. Stigma 5, red, reflexed.

Our drawing of this plant was taken at the Nursery of Messrs. Allen and Co. of the Union Nursery.

PERANTHUM



This is a very common plant in the mountains of the Himalayas, and is also found in the mountains of the Himalayas.

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Pl. in P. Lichensis 176 Ricadilla Nov 1822

F. W. H. H. H.

PELARGONIUM intertextum.

Interwoven Stork's-bill.

P. intertextum, scapo diviso subpaniculato, umbellis multifloris, foliis ovatis obtusis simplicibus laciniatis ternatisque inæqualiter dentatis utrinque pilosis, petalis distinctis patentibus reticulato-venosis.

Root tuberous. *Stem* very short. *Leaves* variable, scarcely two alike, roundly ovate, obtuse, simple, jagged or ternate, unequally and deeply notched, with blunt rounded teeth, strongly veined underneath, hairy on both sides. *Petioles* unequal in length, a little flattened on the upper side and rounded on the lower, thickly clothed with long villous hairs, as is every other part of the plant except the corolla. *Stipules* lanceolate, taper-pointed, fringed. *Scape* leafy, branching. *Peduncles* widely spreading. *Umbels* many-flowered. *Involucre* of numerous unequal bractes, some lanceolate, others linear, acute. *Pedicles* very short. *Calyx* 5-cleft, segments unequal, lanceolate, bluntish. *Nectariferous tube* about half as long again as the calyx, flattened on each side, nearly sessile. *Petals* 5, small, distinct at the base, spreading, of a bright scarlet, reticulately veined with black veins. *Filaments* 10, united into a tube, seven bearing anthers, which in our specimens were always imperfect. *Germen* villous. *Style* short, very hairy. *Stigmas* 5, reflexed.

This elegant flowering plant is of hybrid origin, and was raised in the superb collection of Robert H. Jenkinson, Esq. from a seed of *P. fulgidum* that had been fertilized by the pollen of *Hoarea reticulata*. Its elegance of growth, and abundance of bloom, which

continues in succession nearly all the summer, makes it a very desirable plant, which, if properly managed, may be grown as freely as any other. Like the other tuberous-rooted kinds, it thrives well in an equal mixture of light turfy loam, peat, and sand; watering it only when quite dry, and never over the leaves; those being so tender in this tribe, that by watering over them frequently they turn brown and look unsightly, which also injures the health of the plants. In winter they must be kept quite dry till they begin to grow again, when they should be repotted and watered regularly. The best method of propagating them is from the little tubers of the roots.

Our drawing was taken at the above collection, which continues inexhaustible in novelty, and where numerous beautiful and curious varieties are continually making their appearance; which enriches our work, and likewise the gardens of the curious.



E. D. Smith del

Robt by F. Ridgway 179 Piccadilly Nov^r 1823

J. Watts sculp

PELARGONIUM paucidentatum.

Distant-toothed Stork's-bill.

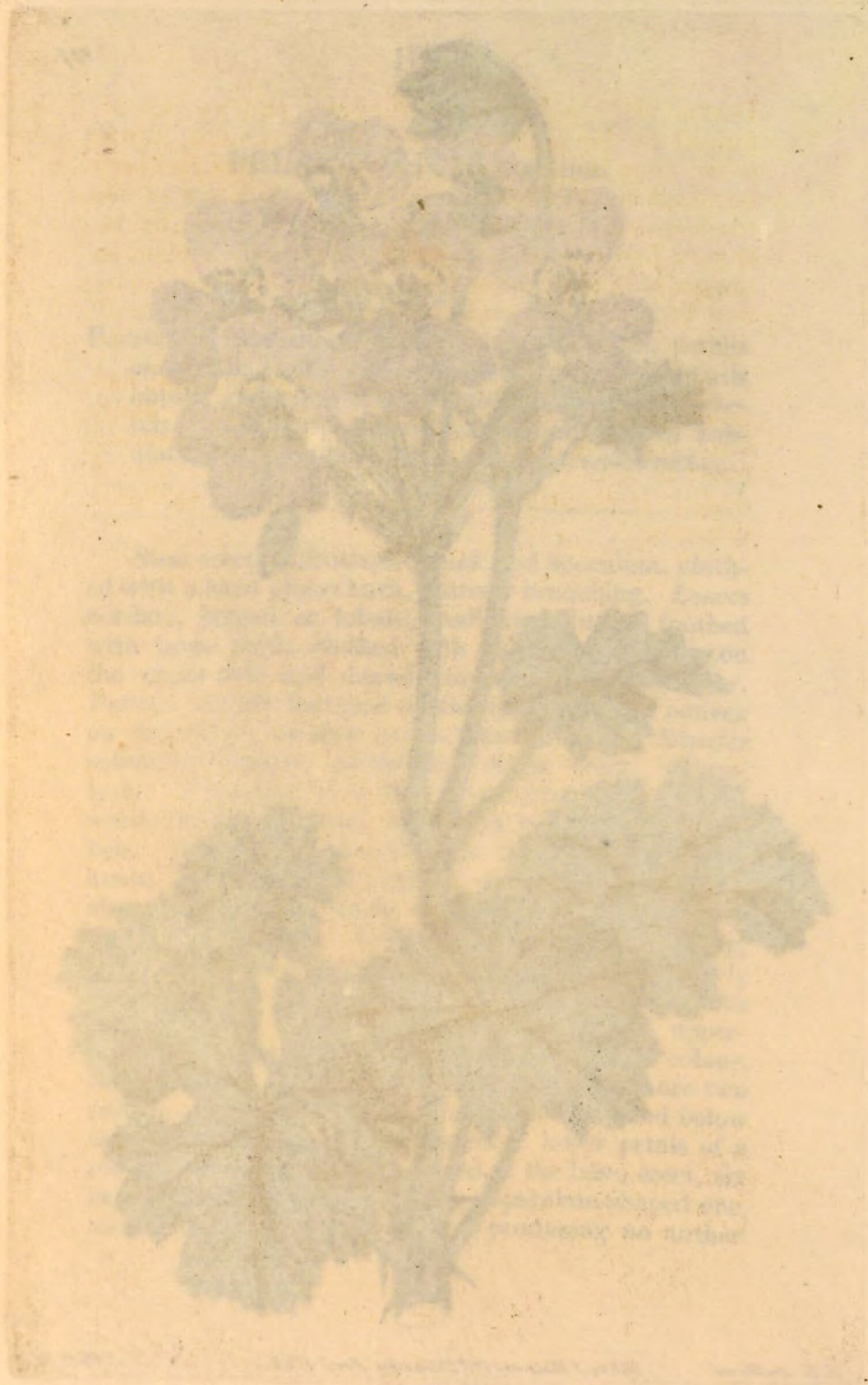
P. paucidentatum, pedunculis subquadrifloris, foliis cordatis subtrilobis undulatis glabriusculis obsolete dentatis ciliatis, stipulis lato-cordatis acutis, tubo nectarifero calyce multum breviori.

Stem shrubby, flexuose, branching; *branches* spreading, flexuose, thickly clothed with long white villous hairs. *Leaves* broader than long, cordate, slightly 3-lobed, undulate, smoothish, ciliate, and toothed with small unequal distant teeth; points a little recurved. *Petioles* flattened and furrowed on the upper side and convex on the lower, thickly covered with long villous hairs, as are the peduncles and calyx. *Stipules* broadly cordate, acute, entire, ciliate. *Peduncles* generally 4-flowered. *Involucre* of about six unequal, concave, pointed bractes, some of them obovate, others ovate or lanceolate. *Pedicles* villous, double the length of the nectariferous tube. *Calyx* 5-cleft, segments broadly lanceolate, concave, spreading. *Nectariferous tube* unequal in length, sometimes nearly as long, at other times not half the length of the calyx. *Petals* 5, the two upper ones broadly obovate, of a bright lilac, tinged with rose in the centre, on which is a large dark velvety mark, and from it branch several purple lines in different directions: lower petals oblongly ovate, of a paler colour. *Filaments* 10, united at the base, seven bearing anthers. *Style* purple, hairy at the base and smooth upwards. *Stigmas* 5, reflexed or revolute.

The plant from which our drawing was taken, was kindly communicated to us, with two others, from the collection of C. Hoare, Esq. of Luscombe, near Exeter,

Devon. It is a hybrid production; and we are informed by the gardener, Mr. Saunders, that it was raised from the seed of *P. multiflorum*? that had been fertilized by *P. Thynneæ*. The *P. multiflorum* of the gardens, which we suppose to be the plant referred to, is very badly named, there being scarcely a plant in the genus that produces fewer flowers; it would therefore be much better to name it *P. pauciflorum*, or *P. diffusum* from its spreading habit.

The present subject is a pretty flowering plant, and produces abundance of bloom; it is also a hardy sort, requiring only protection from frost, growing freely in a rich light soil. Cuttings may be rooted readily, if planted in pots and placed in a sheltered situation.





PELARGONIUM erectum.

Upright Stork's-bill.

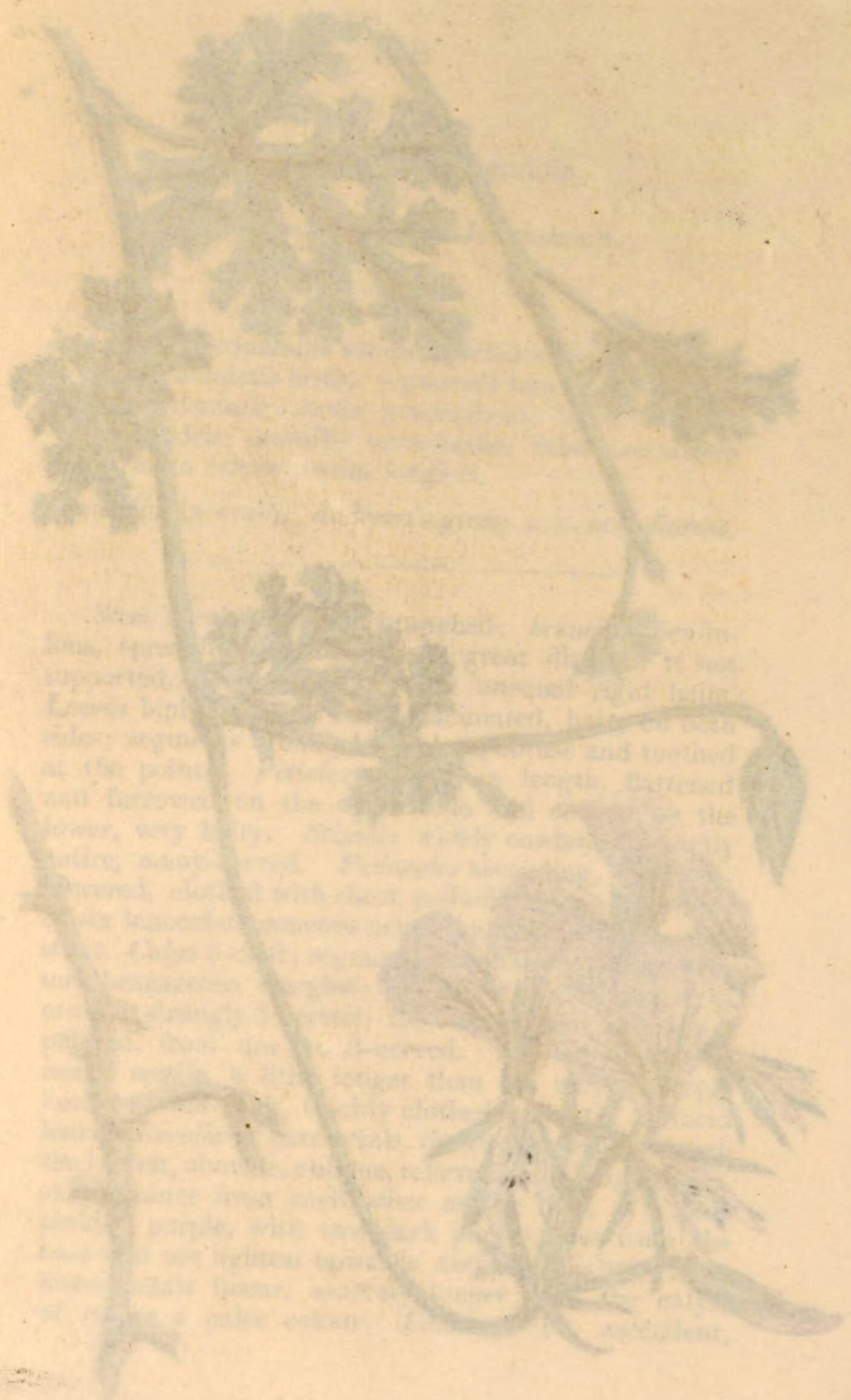
P. erectum, umbellis multifloris subpaniculatis, petalis obcordatis, foliis cordatis inciso-lobatis undulatis obtuse grosseque dentatis subtus tomentosis, bracteis magnis calyce sesquolongioribus, stipulis subulatis persistentibus, caule crasso carnosso erecto.

Stem erect, suffruticose, thick and succulent, clothed with a hard glossy bark, scarcely branching. *Leaves* cordate, jagged or lobate, undulate, bluntly toothed with large teeth, clothed with a short pubescence on the upper side and densely tomentose on the lower. *Petioles* slightly flattened on the upper side and convex on the lower, swollen at the base, villous. *Stipules* subulate, fringed, persistent. *Scape* erect, villous, leafy. *Peduncles* in a kind of panicle, thickened towards the base, villous, producing many-flowered umbels. *Involucre* of several large oblong or lanceolate, acute, concave, villous bractes, all joined at the base, about half as long again as the calyx. *Pedicles* very short, scarcely any. *Calyx* 5-cleft; segments oblong, obtuse, villous, all reflexed. *Nectariferous tube* nearly four times the length of the calyx, flattened on both sides, villous. *Petals* 5, obcordate, the two uppermost rather largest, the upper part of a rosy colour, the lower part white; between the two colours are two reddish purple spots, sometimes confluent; and below these are several linear red specks: lower petals of a rosy lilac. *Filaments* 10, united at the base, erect, six bearing anthers, besides a large spatulate-shaped one, terminated in a sharp point, but producing no anther.

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Pollen yellow. *Style* short, smooth. *Stigmas* 5, red, reflexed.

This curious and handsome plant is a hybrid production, having been raised at the Nursery of Mr. Colvill, from a seed of *P. particeps*, mixed with the pollen of *P. cortusæfolium*. Another handsome mule has flowered that was raised at the same time from *P. echinatum*, fertilized by *P. sæpeflorens*. We think the latter more beautiful than the present. Many other very curious ones were raised at the same time, but have not yet flowered. One very singular one, with the habit of the present, was raised from *P. ardens*, mixed with *P. echinatum*: this we expect will be very handsome. Another, of nearly the same habit, is from *P. sanguineum* with *P. echinatum*: and many other very curious crosses of this tribe.

The present plant thrives well in a mixture of turfy loam, peat, and sand; and being of a succulent habit, it requires but little water. The same treatment as is recommended for *P. cortusæfolium*, *P. echinatum*, and others of this section, is also suitable to this plant. The best method of propagating it is by the little tubers from the roots.





G. D. Smith del.

Rel. by J. Ridgway 170 Piccadilly Nov. 1. 1823.

J. Walter sc.

JENKINSONIA pendula.

Pendulous-branched Jenkinsonia.

J. pendula, pedunculis subquinquefloris, foliis bipinnatifido-laciniatis hirtis: segmentis lanceolatis obtusis apice dentatis, caule procumbente hirto, floribus heptandris; corollis tetrapetalis, tubo nectarifero carinato calyce parum longiori.

Geranium lacerum. *Andrews's geran. c. ic. nec aliorum.*

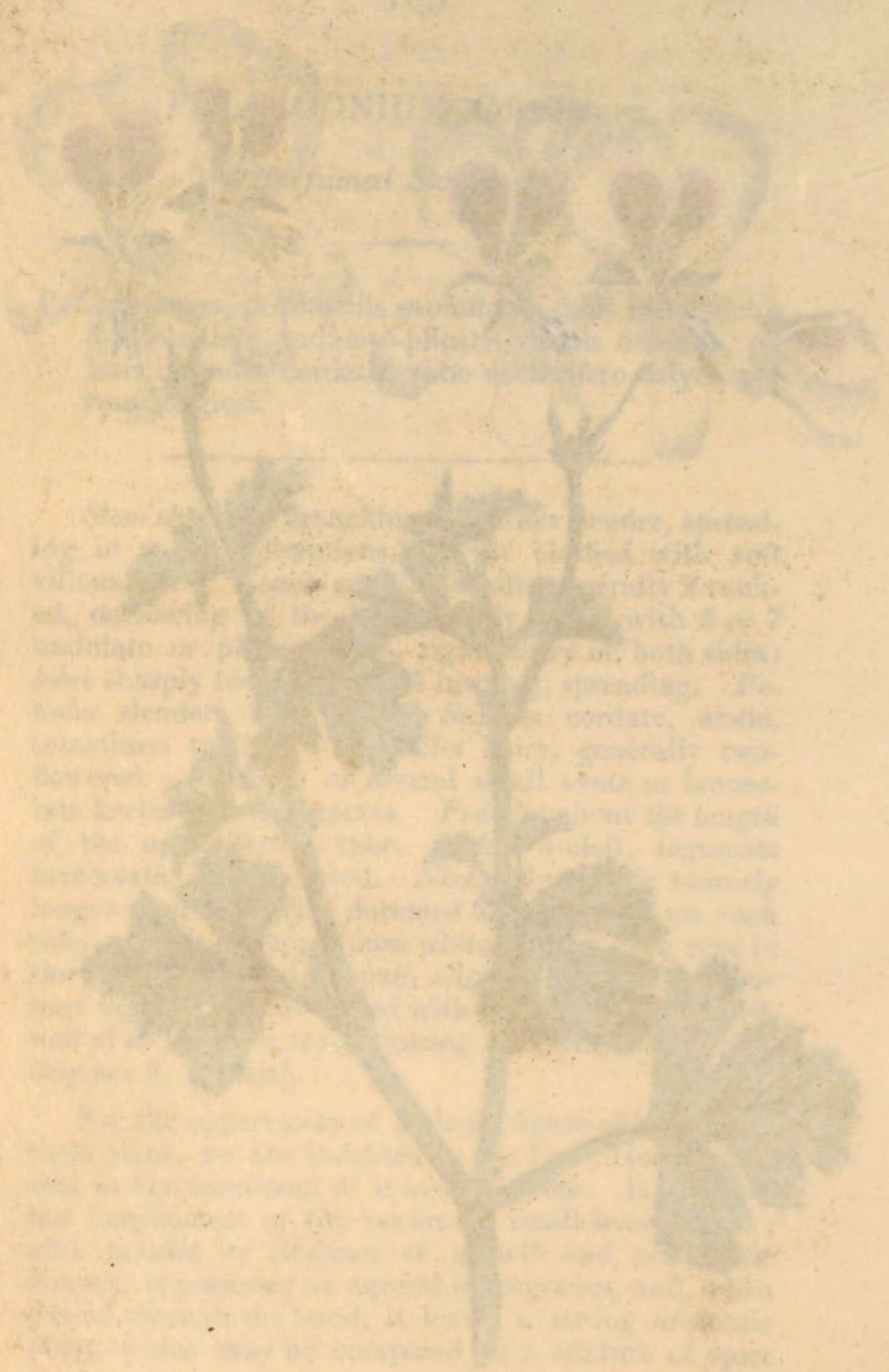
Stem shrubby, much branched; *branches* pendulous, spreading all round to a great distance if not supported, thickly clothed with unequal rigid hairs. *Leaves* bipinnatifid or deeply laciniated, hairy on both sides; segments broadly lanceolate, obtuse and toothed at the points. *Petioles* unequal in length, flattened and furrowed on the upper side and convex on the lower, very hairy. *Stipules* widely cordate, generally entire, many-nerved. *Peduncles* ascending, mostly 5-flowered, clothed with short pellucid hairs. *Involucre* of six lanceolate concave acute bractes. *Pedicles* very short. *Calyx* 5-cleft; segments unequal, spreading, with membranaceous margins; the upper one largest, lanceolate, strongly 3-nerved; the others linear and taper-pointed, from one to 3-nerved. *Nectariferous tube* nearly sessile, a little longer than the calyx, sharply keeled at the back, thickly clothed with stiff pellucid hairs. *Corolla* of four petals, the two uppermost much the largest, obovate, oblique, reflexed, with long unguis, at a distance from each other at the base, of a pale pinkish purple, with two dark purple lines from the base that are lightest upwards and slightly branched; lower petals linear, scarcely longer than the calyx, of rather a paler colour. *Filaments* 10, ascendent,

united at the base, seven bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* of a pale flesh-colour, quite smooth. *Stigmas* 5, pale purple, reflexed.

Our drawing was taken from a plant that we received from Robert H. Jenkinson, Esq. Mr. Andrews has given a figure of it under the name of *Geranium lacerum*; but it is very different from *P. lacerum* of Jacquin. It is a very desirable plant for training to a trellis, or for placing on a shelf, where its pendulous branches may hang down. We believe it to be an original species, and it is an old inhabitant of our gardens, but was become very scarce; and we were afraid that it had disappeared from them altogether, until we received it from Mr. Jenkinson. It is of free growth, and as hardy as any of the tribe, thriving well in a mixture of light sandy loam and peat, or any light vegetable mould. Cuttings of it soon strike root, if planted in pots and placed in a sheltered situation.

ADONIS

Adonis autumnalis



Stems, erect, simple, leafy, 1 to 2 feet high. Leaves, large, cordate, deeply lobed, 2 to 4 inches long, 1 to 2 inches wide, base of leaf rounded, apex obtuse, veins prominent. Flowers, bell-shaped, 1 to 2 inches long, 1 to 2 inches wide, yellow, with dark spots on the petals. Corms, small, rounded, 1 to 2 inches long, 1 to 2 inches wide, base of corm rounded, apex obtuse, veins prominent. Young plants, small, rounded, 1 to 2 inches long, 1 to 2 inches wide, base of plant rounded, apex obtuse, veins prominent.



E. D. Smith. del.

Printed by J. Ridgway 170 Piccadilly Dec. 1, 1823.

J. Watts sc.

PELARGONIUM *Cosmianum*.

Perfumed Stork's-bill.

P. Cosmianum, pedunculis subbifloris, foliis subdistichis 5-7 lobatisve undulato-plicatis rigidis dentatis, pilosis, stipulis cordatis, tubo nectarifero calyce parum longiori.

Stem shrubby, branching; *branches* slender, spreading in various directions, thickly clothed with soft villous hairs. *Leaves* small, distant, generally 2-ranked, narrowing at the base, deeply lobed with 5 or 7 undulate or plaited lobes, rigid, hairy on both sides: *lobes* sharply toothed, folded inwards, spreading. *Petioles* slender, very hairy. *Stipules* cordate, acute, sometimes toothed. *Peduncles* hairy, generally two-flowered. *Involucre* of several small ovate or lanceolate keeled pointed bractes. *Pedicles* about the length of the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, taper-pointed. *Nectariferous tube* scarcely longer than the calyx, flattened and furrowed on each side. *Petals* 5; upper ones white, with a dark spot in the centre on a red ground, slightly branched; lower ones ligulate, white tinged with blush. *Filaments* 10, united at the base, seven bearing anthers. *Style* hairy. *Stigmas* 5, reflexed.

For the opportunity of giving a figure of this pretty little plant, we are indebted to Sir R. C. Hoare, who sent us fine specimens of it in full bloom. It is one of the handsomest of the perfumed small-leaved sorts; and, besides its elegance of growth and neat little flowers, it possesses an agreeable fragrance, and, when passed through the hand, it leaves a strong aromatic scent, which may be compared to a mixture of spice

and citron. It is of hybrid origin, and is probably the offspring of hybrid parents for several generations, being related to *P. crispum* and *P. hermannifolium*, and many others of the same tribe; but what its real parents were is not easy to be ascertained. Like the more common kinds, it will thrive well in a mixture of sandy loam and peat, or any other light vegetable soil; and young cuttings of it will soon strike root, if planted in pots and placed in a sheltered situation.

Stem shrubby, branching; branches slender, spreading in various directions, thickly clothed with soft villous hairs. Leaves small, distant, generally 2-ranked, narrowing at the base, deeply lobed with 6 or 7 undulate or pinnate lobes, rigid, hairy on both sides; lobes sharply toothed, folded inward, spreading. Petioles slender, very hairy. Stipules cordate, acute, sometimes toothed. Peduncles hairy, generally two-flowered. Bracts of several small ovate or lanceolate keeled pointed bracts. Pedicels about the length of the peduncles. Calyx 5-lobed, segments lanceolate, apex pointed. Nectariferous tube scarcely longer than the calyx, flattened and narrowed on each side. Lobes 5, upper ones white, with a dark spot in the center, lower ones red around, slightly fringed; lower ones ligulate, white edged with pink. Filaments 10, united at the base, seven bearing anthers. Style hairy. Ovary 5, reflexed.

For the opportunity of giving a figure of this pretty little plant, we are indebted to Mr. H. C. Moore, who sent us one specimen of it in full bloom. It is one of the handsomest of the perennial small-leaved sorts; and, besides its elegance of growth and neat little flowers, it possesses an agreeable fragrance, and, when passed through the hand, it leaves a strong aromatic scent, which may be compared to a mixture of spices.



E.D. Smith. del.

Pub. by J. Ridgway 175 Piccadilly Dec. 1. 1823.

J. Watts. sc.

PELARGONIUM selectum.

Choice Stork's-bill.

P. selectum, caule erecto carnosso suffruticoso, scapo

—◆—

diviso, foliis cordatis quinquelobis subtus tomentos-
sis, calycibus reflexis, tubo nectarifero subsessili
calyce quadruplo longiori.

Root tuberous. *Stem* suffruticose, short, erect, clothed with a brown scaly bark. *Leaves* cordate, deeply 5-lobed, unequally toothed, densely tomentose underneath; lower lobes generally 2-lobed. *Petioles* clothed with very short hairs, and a few long ones intermixed. *Scape* erect, rigid, branching, covered with unequal spreading hairs. *Peduncles* hairy. *Umbels* many-flowered. *Involucre* of several lanceolate, acute, keeled, ciliate bractes. *Calyx* 5-cleft, segments unequal, some ovate, others lanceolate, bluntish, all reflexed. *Nectariferous tube* more than four times longer than the calyx, flattened on each side, gradually tapering downwards. *Petals* 5, strongly veined underneath, of a rosy purple, with a dark velvet spot in each that covers above half the petals: two upper ones obcordate; lower ones spatulately oblong. *Filaments* 10, straight, united at the base, one of them very large and spatula-shaped, which produces no anther, six only bearing anthers. *Pollen* yellow. *Germen* and *aristæ* villous. *Style* slightly hairy at the base and smooth upwards. *Stigmas* 5, red, reflexed.

This very handsome plant is a hybrid production, and was raised from a seed of *P. lobatum*, in the choice collection of Robert Henry Jenkinson, Esq. where our drawing was taken this summer. What its other parent was, we have not ascertained, but we suspect it

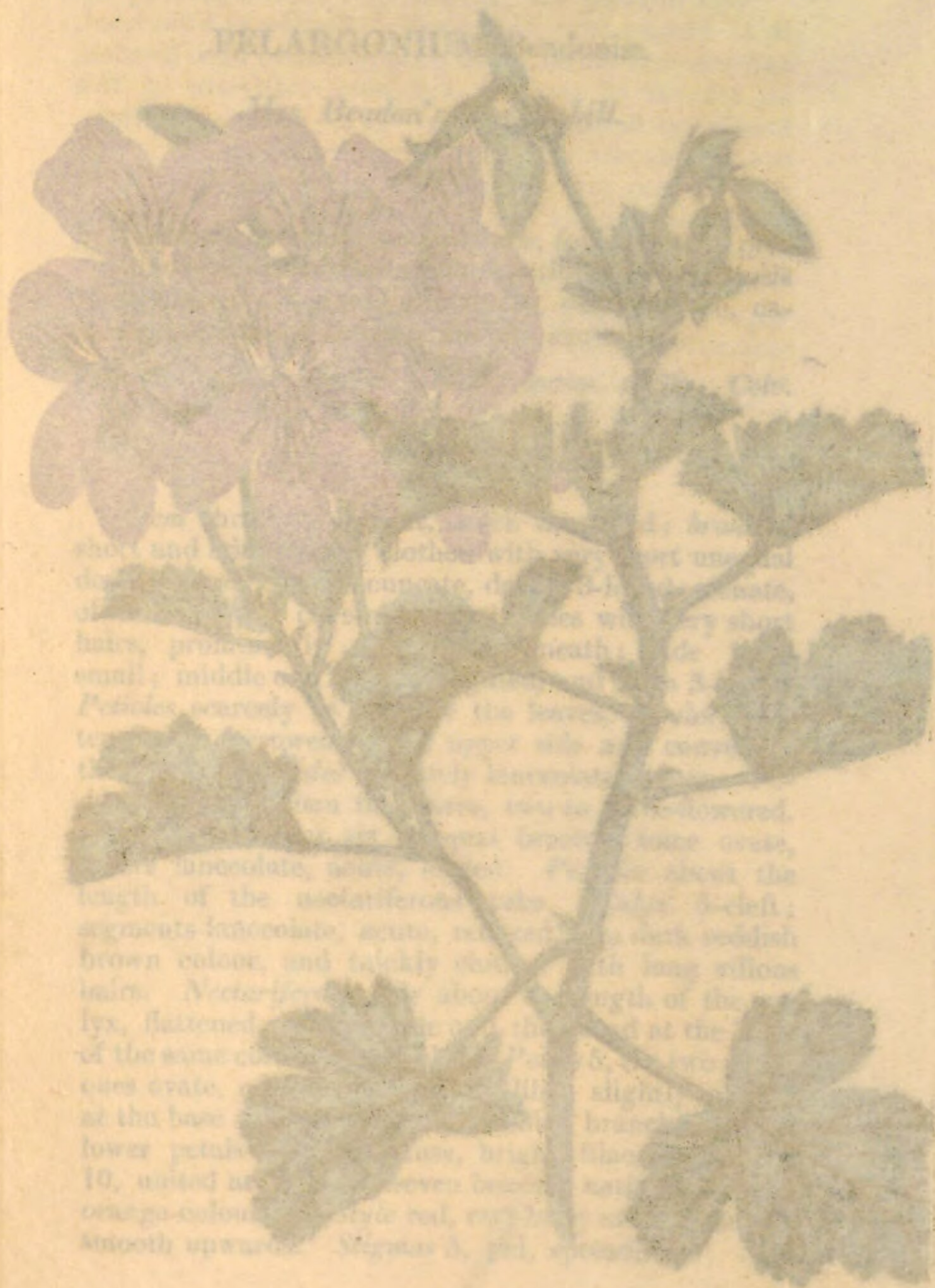
to be either *P. saepiflorens* or *P. imbricatum*; we know of no other kind that could have produced the colour and shape of the flower; and we have not seen one that has pleased us better than the present, being so very distinct in every way from any other. It is likely to continue scarce for some time, except increased by seeds, the plants from which would come true, if care were taken to set its flowers with its own pollen: perhaps it might be also propagated, but sparingly, by cuttings of the roots. The best soil to grow it in, is an equal mixture of turfy loam, peat, and sand; and particular care must be taken not to keep it too moist in winter.

Root tuberous. Stem suffrutescent, short, erect, clothed with a brown scaly bark. Leaves cordate, deeply 5-lobed, unequally toothed, densely tomentose underneath; lower lobes generally 2-lobed. Petioles clothed with very short hairs, and a few long ones intermixed. Scape erect, rigid, branching, covered with unequal spreading hairs. Peduncles hairy. Umbels many-flowered. Involucres of several lanceolate, acute, keeled, ciliate bracts. Calyx 5-lobed, segments unequal, some ovate, others lanceolate, bluntish, all reflexed. Vestimentary tube more than four times longer than the calyx, flattened on each side, gradually tapering downwards. Petals 5, strongly veined underneath, of a rosy purple, with a dark velvet spot in each that covers above half the petals: two upper ones obcordate; lower ones spatulate-oblong. Filaments 10, straight, united at the base, one of them very large and spatulate-shaped, which produces no nectar, six only bearing anthers. Pollen yellow. Germen and style slightly hairy at the base and smooth upwards. Stigma 5, red, reflexed.

This very handsome plant is a hybrid production, and was raised from a seed of *P. lobatum*, in the choice collection of Robert Henry Jackson, Esq. where our drawing was taken this summer. What its other parent was, we have not ascertained, but we suspect it

PELAGONHUS

Bentley's



Stems erect, branched, with short, spreading hairs, and small, middle-lobed leaves. Petals very large, dark, with long, slender, yellowish, flattened, and slightly curved at the tip. The lower petals are larger than the upper ones, and the lower petals are united at the base. The lower petals are bright yellow, and the upper petals are dark. The style is red, and the stigma is yellow. Smooth upwards. Siliqua 2, pedicel, spreading.



E. D. Smith del. Pub by J. Ridgway 170 Piccadilly Dec. 1. 1829.

J. Watts sculp.

PELARGONIUM Beadoniæ.

Mrs. Beadon's Stork's-bill.

P. Beadoniæ, pedunculis subtrifloris, foliis cuneatis profunde trilobis crenatis pubescentibus: lobis obtusis intermedio elongato subtrilobo, caule ramoso, calycibus reflexis longitudine tubi nectariferi.

Pelargonium Beadoniæ. *Hoare* *geran.* p. 26. *Colv. catal. ed. 2.* p. 23. col. 2.

Stem shrubby, upright, much branched; *branches* short and stiff, thickly clothed with very short unequal downy hairs. *Leaves* cuneate, deeply 3-lobed, crenate, obtuse, opaque, covered on both sides with very short hairs, prominently nerved underneath; side lobes small; middle one large, elongated, and often 3-lobed. *Petioles* scarcely as long as the leaves, slender, flattened and furrowed on the upper side and convex on the lower. *Stipules* cordately lanceolate, acute. *Peduncles* longer than the leaves, two to three-flowered. *Involucre* of about six unequal bractes, some ovate, others lanceolate, acute, keeled. *Pedicles* about the length of the nectariferous tube. *Calyx* 5-cleft; segments lanceolate, acute, reflexed, of a dark reddish brown colour, and thickly clothed with long villous hairs. *Nectariferous tube* about the length of the calyx, flattened on each side and thickened at the base, of the same colour as the calyx. *Petals* 5, the two upper ones ovate, of a bright reddish lilac, slightly marked at the base with purple stripes which branch a little; lower petals oblong, obtuse, bright lilac. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Style* red, very hairy at the base and smooth upwards. *Stigmas* 5, red, spreading.

Our drawing was taken from a plant sent us by Sir R. C. Hoare, from his superb collection at Stourhead, and who has named it, in compliment to Mrs. Beadon, an admirer of, and an extensive cultivator of this handsome family of plants. It is of hybrid origin, but its parents are not easily ascertained. It is very distinct from any other with which we are acquainted, and being of short bushy growth, makes it a desirable plant, particularly as it continues to bloom nearly all the year. It is also as hardy as any of the genus, only requiring protection from frost, and not to be over-watered in winter. It thrives well in a mixture of turfy loam and peat, or any light vegetable soil; and cuttings soon strike root, if planted in pots and placed in a sheltered situation.

Stems shrubby, upright, much branched; branches short and stiff, thickly clothed with very short unequal downy hairs. Leaves sessile, deeply 3-lobed, crenate, obtuse, opaque, covered on both sides with very short hairs, prominently nerved underneath; side lobes small; middle one large, elongated, and often 3-lobed. Petioles scarcely as long as the leaves, slender, flattened and furrowed on the upper side and convex on the lower. Stipules cordately lanceolate, acute. Petioles longer than the leaves, two to three-flowered. Peduncles of about six unequal bracts, some ovate, others lanceolate, acute, keeled. Petioles about the length of the nectariferous tube. Calyx 5-lobed; segments lanceolate, acute, reflexed, of a dark reddish brown colour, and thickly clothed with long villous hairs. Nectariferous tube about the length of the calyx, flattened on each side and thickened at the base, of the same colour as the calyx. Petals 5, the two upper ones ovate, of a bright reddish lilac, slightly marked at the base with purple stripes which branch a little; lower petals oblong, obtuse, bright lilac. Filaments 10, united at the base, seven bearing anthers. Pollen orange-coloured. Style red, very hairy at the base and smooth upwards. Stigma 2, red, spreading.





C. D. Smith. del.

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J. Wallis. sc.

PELARGONIUM crassicaule.

Thick-stalked Stork's-bill: α. et β.

P. crassicaule, umbellis multifloris, petalis obcordatis, foliis reniformibus obacuminatis undulato plicatis dentatis pulverulento-pubescentibus, caule carnosio ramoso lævi.

Pelargonium crassicaule. Willd. *sp. pl.* 3. p. 668.
Pers. syn. 2. p. 231. *Hort. Kew. ed.* 2. p. 172.

α. album, petalis albis 2 superioribus basi punctatis.
fig. a.

Pelargonium crassicaule. L'Hérit. *ger. t.* 26.

β. maculatum, petalis omnibus maculatis. *fig. b.*

Pelargonium crassicaule. Bot. mag. 477.

Geranium crassicaule. Andrews's *geran. c. icone.*

Stem shrubby, succulent, branching; of a brown colour: *flowering branches* elongated, with opposite leaves, and axillary peduncles, covered with a kind of powdered pubescence, as are the leaves, peduncles, calyx, and bractes. *Leaves* reniform, acuminate downwards, undulate or plicate; toothed with unequal obtuse teeth. *Petioles* very long, flattened and channelled on the upper side, and thickened at the base. *Stipules* lanceolate, acute, densely pubescent, and ciliated at the margins. *Peduncles* reaching beyond the leaves, many-flowered. *Involucre* generally of seven lanceolate, acute bractes, unequal in size. *Pedicles* very short, covered with soft villous hairs; erect when in flower, but declining when in fruit. *Calyx* 5-cleft; back segment erect, the others reflexed, lanceolate, and all

covered with soft villous hairs. *Nectariferous tube* about three times the length of the calyx, slightly flattened, villous. *Corolla* of 5 petals, all obcordate, white; in *var. β.* each marked with a bright purple reniform spot; the two back petals are also spotted at the base, with small spots of various forms of a lighter colour. *Filaments* 10, united at the base, six bearing perfect anthers, not pentandrous, as described by Willdenow and Persoon: besides those, is a large spatulate filament, as in the others of this section; this also is often furnished with an anther. *Pollen* yellow. *Style* red, shorter than the stamens. *Stigmas* 5, reflexed.

This fine species was first introduced to this country by A. P. Hove, Esq. who brought it with him from the south-west coast of Africa, with several other beautiful plants belonging to this family; and we have been informed by him, that he there saw an innumerable variety of very curious plants belonging to this family, particularly to *Pelargonium* and *Monsonia*, many of them growing in sand, and others in the crevices of rocks, &c. The spotted-flowered variety is certainly one of the most desirable plants of the genus; but it still continues very scarce, being very difficult to propagate. As it makes so few branches, there are scarcely any cuttings to spare; the best way is, therefore, to increase it by seeds, the flowers of which must be set with their own pollen to have them true. It may also be increased by cuttings of the root. The best soil for it is an equal mixture of turfy loam, peat, and sand, the same as recommended for others of this tribe; and it succeeds better on a dry shelf in the greenhouse in winter, than it does in the hothouse, as it grows stronger and flowers better; but care must be taken not to overwater it when in a dormant state.

Our drawing of the spotted variety was taken from a plant at the Nursery of Messrs. Whitley, Brames, and Milne, at Fulham; the white variety flowered at the Nursery of Mr. Colvill, in the King's Road, Chelsea.



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J. Watts, sc.

PELARGONIUM inscriptum.

Marked-petal'd Stork's-bill.

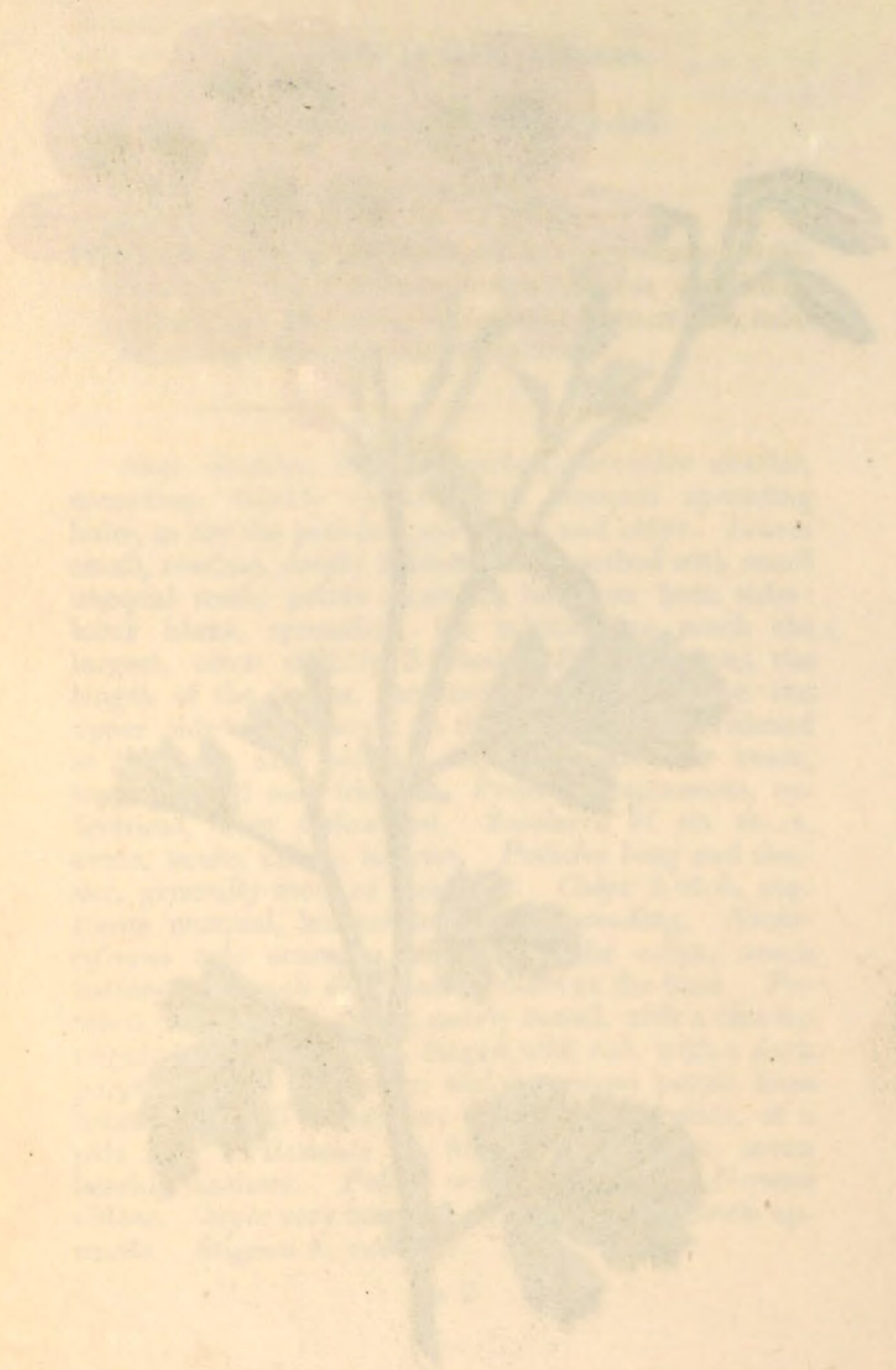
P. inscriptum, pedunculis paucifloris subpaniculatis, foliis inferioribus cordatis sublobatis undulatis inæqualiter dentatis: superioribus cuneatis incisodentatis, petalis venosissimis, tubo nectarifero calyce subtriplo breviori.

Stem shrubby, branching, of smallish growth; *branches* numerous, erect, thickly clothed with long spreading villous hairs, as are the petioles, peduncles, and calyx. *Leaves* variable; lower ones cordate, scarcely lobed, much undulate, and toothed with sharp unequal teeth, strongly and numerously nerved underneath, hairy on both sides; upper leaves wedge-shaped, more lobed or incised, sharply toothed, pointed. *Petioles* short, flattened and furrowed on the upper side and convex on the lower, a little widened at the base. *Stipules* cordately-ovate, acute, generally toothed. *Peduncles* cylindrical, few-flowered. *Involucre* of six lanceolate acute fringed bractes. *Pedicles* unequal in length, about three times as long as the nectariferous tube. *Calyx* 5-cleft; segments erect, lanceolate, taper-pointed. *Nectariferous tube* very short, often three times shorter than the calyx. *Petals* 5, spreading; two upper ones roundly obovate or obcordate, of a blush-colour, with a large bright red spot in the centre, and numerous red and purple streaks and lines which branch all over the petals: lower petals oblong or obovate, of rather a lighter colour, also marked with red lines. *Filaments* 10, united at the base, seven bearing anthers, which in our specimens were always imperfect. *Germen* villous. *Style* red, hairy below and smooth upwards. *Stigmas* 5, red and revolute.

This curious plant is a hybrid production, and one of its parents we suspect to be *P. lineatum*: the other must be one of a larger tribe; but what it really was, is at present unknown to us.

Our drawing was taken from a fine plant, in the collection of Robert H. Jenkinson, Esq. where it was raised from seed, and continues covered with its elegant flowers nearly all the summer. It also makes a snug bushy plant if managed well, not being of so luxuriant growth as many others; and is therefore better adapted for a small greenhouse. It thrives well in a mixture of light turfy loam and peat, or any other light vegetable mould; and cuttings soon strike root, if planted in pots and placed in a sheltered situation.

Branches numerous erect, thickly clothed with long spreading villous hairs, as are the petioles, peduncles, and calyx. Leaves variable; lower ones cordate, scarcely lobed, much undulate, and crenate with sharp, unequal teeth, strongly and numerously nerved underneath, hairy on both sides; upper leaves wedge-shaped, more lobed or imbricated, sharply toothed, pointed. Petioles short, flattened and narrowed on the upper side and convex on the lower, a little widened at the base. Stipules cordately-ovate, acute, generally toothed. Peduncles cylindrical, few-flowered. Pedicels unequal in length, about three times as long as the aestivation tube. Calyx 5-lobed; segments erect, imbricate, taper-pointed. Ventrals four very short, often three times shorter than the calyx. Ventrals 2, spreading; two upper ones roundly ovate or obovate, of a blush-colour, with a large bright red spot in the centre, and numerous red and purple streaks and lines which branch all over the petals; lower petals oblong or obovate, of rather a lighter colour, also marked with red lines. Aestivation 5; located at the base, seven bearing hairs, which in our specimens were always imbricated. Ventrals yellow, sides red, hairy below and smooth above. Siliques 2, red and hairy.





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J. Watts. sc.

PELARGONIUM affluens.

Numerous-flowered Stork's-bill.

P. affluens, umbellis plurifloris subpaniculatis, foliis cordatis trilobis dentatis hirsutis; lobis divaricatis obtusis apice recurvis, stipulis cordatis acutis, tubo nectarifero calyce parum longiori.

Stem shrubby, much branched; *branches* slender, spreading, thickly clothed with unequal spreading hairs, as are the petioles, peduncles, and calyx. *Leaves* small, cordate, deeply 3-lobed, and toothed with small unequal teeth, points recurved, hairy on both sides: lobes blunt, spreading, the middle one much the largest, often slightly 3-lobed. *Petioles* about the length of the leaves, flattened and furrowed on the upper side and convex on the lower, a little widened at the base and point. *Stipules* cordate or ovate, taper-pointed and fringed. *Peduncles* numerous, cylindrical, 4 or 5-flowered. *Involucre* of six short, ovate, acute, ciliate bractes. *Pedicels* long and slender, generally more or less bent. *Calyx* 5-cleft, segments unequal, lanceolate, acute, spreading. *Nectariferous tube* scarcely longer than the calyx, much flattened on each side, and gibbous at the base. *Petals* 5, the two upper ones nearly round, with a slender unguis, of a bright lilac, tinged with red, with a dark purple mark in the centre, and numerous purple lines branching in all directions; lower petals ligulate, of a pale lilac. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* very hairy at the base and smooth upwards. *Stigmas* 5, revolute.

The present subject is one of the sorts mentioned by us in a former number, that we received from the collection of C. Hoare, Esq. of Luscombe, near Exeter; and we are informed by Mr. Saunders, that it is a hybrid production, raised by him from the seed of *P. dumosum* that had been fertilized by the pollen of *P. Watsoni*. It appears to be a very desirable plant, on account of its abundance of bloom, with which it is covered nearly all the summer: it is also a neat-growing, bushy plant, not of so robust a habit as many others, and is therefore a more proper plant for small collections; thriving well in any rich light soil. Cuttings of it will root readily, if planted in pots and placed in a sheltered situation.

Stems shrubby, much branched, spreading, thickly clothed with unequal spreading hairs, as are the petioles, peduncles, and calyx. Leaves small, cordate, deeply 3-lobed, and toothed with small unequal teeth, points recurved, hairy on both sides; lobes blunt, spreading, the middle one much the largest, often slightly 3-lobed. Petioles about the length of the leaves, flattened and twisted on the upper side and convex on the lower, a little widened at the base and point. Stipules cordate or ovate, taper-pointed and ribbed. Peduncles numerous, cylindrical, 4 or 5-flowered. Bracts of six small, ovate, acute, ciliate bracts. Pedicels long and slender, generally more or less bent. Calyx 3-lobed, segments unequal, lanceolate, acute, spreading. Petals five, the two upper ones nearly round, with a slender margin of a bright blue, tinged with red, with a dark purple mark in the center, and numerous purple lines branching in all directions; lower petals ligulate, of a pale blue. Stamens 10, united at the base, seven bearing anthers. Pollen orange-colored. Ovaries villous. Style very hairy at the base and smooth upwards. Stigma 5, revolute.





PELARGONIUM dependens.

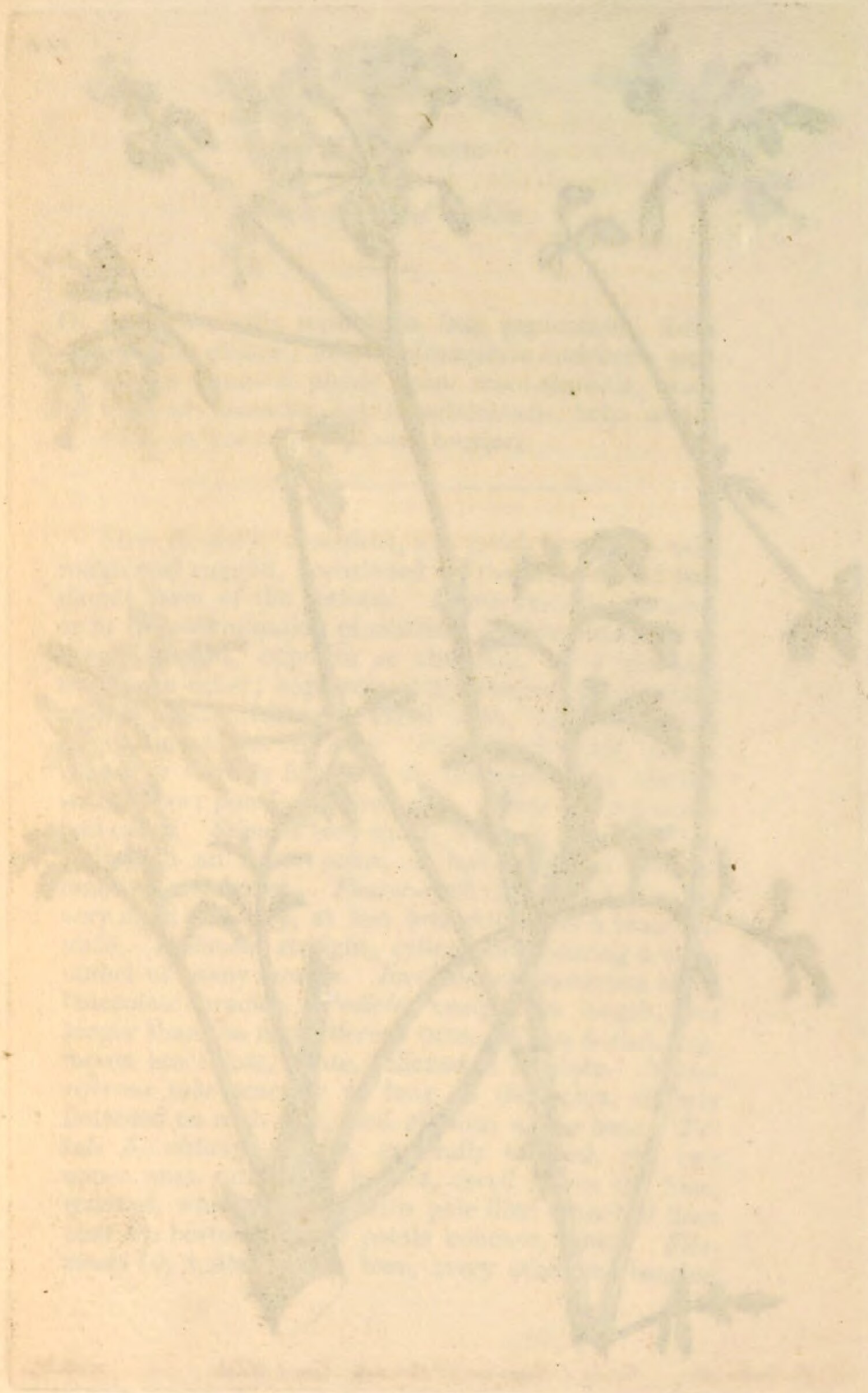
Pendent-petal'd Stork's-bill.

P. dependens, pedunculis subquadrifloris, foliis trilobis hirsutis: lobis cuneatis divaricatis apice inæqualiter dentatis basi integerrimis, petiolis caulisque villosis, petalis inferioribus dependentibus, tubo nectarifero calyce parum longiori.

Stem shrubby, branching; *branches* spreading, thickly clothed with soft villous hairs, as are the petioles, peduncles, and calyx. *Leaves* small, deeply 3-lobed, truncate at the base, hairy on both sides: lobes spreading, broadly wedge-shaped, points unequally toothed, base and sides entire. *Petioles* slender, flattened on the upper side and convex on the lower. *Stipules* ovate or lanceolate, oblique, taper-pointed, sometimes toothed, ciliate. *Peduncles* generally 4-flowered. *Involucre* of six broadly lanceolate, acute, fringed bractes. *Pedicles* unequal in length, scarcely as long as the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, acute, upper one erect, the others reflexed. *Nectariferous tube* a little longer than the calyx, flattened on each side and swollen at the base. *Petals* 5, the two upper ones oblongly obovate, oblique at the base, of a clear white, with a large dark purple patch in the centre, edged with red, and from the base branch numerous red and purple lines on each side; lower petals spatulate, dependent, of a clear white. *Filaments* 10, united at the base, seven bearing anthers. *Pollen* orange-coloured. *Germen* and *aristæ* villous. *Style* very hairy, much shorter than the stamens. *Stigmas* 5, reflexed.

This handsome flowering plant is of hybrid origin, and was raised from seed at the Nursery of Mr. Colvill, produced from a plant received from Sir R. C. Hoare, under the name of *P. Amanda*; this had been fertilized by the pollen of one of the larger sorts, but we cannot refer with certainty to its variety. The present plant is far superior in beauty to the original, and is also of stronger growth, attaining to the middle stature of the genus. It grows very freely in a mixture of light sandy loam and peat, and flowers abundantly all the summer. Cuttings of it strike root readily, if taken off in a young state: these must be planted in pots in the same kind of soil, and may be placed on a shelf in the greenhouse.

Our drawing was taken, in August last, at the Nursery of Mr. Colvill.





E. D. Smith. del.

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S. Watts. sc.

OTIDIA laxa.

Loose-panicled Otidia.

O. laxa, umbellis multifloris laxè paniculatis, foliis pinnatis glabris; foliolis pinnatifidis incisive; segmentis cuneatis planis apice eroso-dentatis, caule fruticoso carnosò, petalis subdentatis, tubo nectarifero calyce reflexo parum breviori.

Stem shrubby, succulent, not much branched, very rough and rugged, occasioned by the stipules and persistent bases of the petioles. *Leaves* smooth, pinnate, or at their termination pinnatifid; *leaflets* pinnatifid or deeply incised, opposite or alternate, at a distance from each other; segments wedge-shaped, flat, toothed at the point with very small teeth, and oftentimes larger ones nearer the base. *Petioles* very long, nearly round or slightly flattened on the upper side, clothed with a short powdery pubescence, as are the peduncles and calyx. *Stipules* very short, wide at the base, but ending in an acute point, at last hardened and remaining persistent. *Flower-stalk* long and slender, very rigid and wiry, at last branching into a loose panicle. *Peduncles* straight, cylindrical, bearing a close umbel of many flowers. *Involucre* of numerous short lanceolate bractes. *Pedicles* unequal in length, but longer than the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, acute, reflexed or revolute. *Nectariferous tube* scarcely as long as the calyx, slightly flattened on each side, and gibbous at the base. *Petals* 5, oblong, obtuse, generally toothed, the two upper ones rather the largest, eared above the base, reflexed, white, marked with pale lilac branched lines near the bottom; lower petals concave, white. *Filaments* 10, united at the base, every other one bearing

anthers, fertile ones straight before the pollen drops, and longer than the petals; afterwards they roll up. *Style* smooth, flesh-coloured, with a few small hairs at the base. *Stigmas* 5, reflexed.

This curious and very distinct species was received by Mr. Colvill, in the year 1821, from the Cape of Good Hope, with several other curious plants belonging to this family; and drawings of several of them are now in our possession. We believe it has never before been published. It is nearer of kin to *P. crithmifolium* than any other with which we are acquainted. Being of a very succulent nature, it requires but little water, except when growing freely. It succeeds best in an equal mixture of light turfy loam, peat, and sand, with the pots well drained with potsherds; and in winter, when its leaves are fallen, it might be kept quite dry till spring. As it makes so few branches, it can scarcely be propagated from cuttings; but seeds of it ripen plentifully, if some pollen be attached to the stigmas when in bloom. Those should be sown early in spring; and, as soon as they come up, should be planted singly in small pots; as, if they are left too long in the seed-pots, they are almost certain to damp off at the root.



Geranium

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.

sp.



C. D. Smith. del.

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J. Watts. sc.

GERANIUM eriostemon.

Hairy-stamen'd Crane's-bill. $\alpha.$ et $\beta.$

G. eriostemon, pedunculis bifloris, foliis quinquelobis utrinque pilosis scabris; segmentis late cuneato-ovatis obtusis dentatis, stipulis lanceolatis acutis, petalis integris calyce aristato paulo longioribus, caule erecto villosa.

Geranium eriostemon. Fischer MSS.

$\alpha.$ *cæruleum.*

$\beta.$ *pallidum.*

Root perennial. *Stems* erect, forked, thickly clothed with unequal villous hairs, as are the petioles, peduncles, and calyx. *Leaves* deeply 5-lobed, hairy on both sides, very rough to the touch: segments broadly wedge-shaped or ovate, unequally toothed with bluntish teeth, much veined underneath. *Petioles* bent, slightly flattened on the upper side and rounded on the lower, swollen at the base. *Stipules* lanceolate, fringed, taper-pointed. *Peduncles* numerous, subpanicled, 2-flowered. *Involucre* generally of six bractes: *bractes* very short, lanceolate, acute, concave, fringed. *Pedicels* longer than the calyx, villous. *Sepals* 5, oblong, concave, with fringed membranaceous margins, and terminated with a blunt fringed arista. *Petals* 5, longer than the calyx, nearly orbicular, rugose, in *var.* $\alpha.$ of a bright blue, in $\beta.$ of a pale blue, lightest round the edges. *Filaments* 10, connected at the base, of a dark purple, thickly clothed about half way up with long white hairs, and all bearing perfect anthers. *Germs* clothed with long white hairs: *aristæ* hairy. *Style* smooth. *Stigmas* 5, blunt, reflexed.

Several plants of this species were raised in the autumn of 1822, at the Nursery of Mr. Colvill, from seeds that had been received from Dr. Fischer under the name that we have adopted, but of what country they were native nothing was said. One of those plants flowered, from which the figure with the dark blue flowers was taken. About the same time we received a plant in fine flower from Sir R. C. Hoare, who informed us that he had raised it from seeds given him by A. B. Lambert, Esq. but he knew not from whence they were procured. The pale blue flower at the bottom of the figure is from this plant, which differed not in the least from the others, except in the shade of colour. From the habit of the plant we suspected it to be a native of Nepaul; and we have since been informed by Mr. D. Don that it is a native of that country, and specimens of it are preserved in Mr. Lambert's Herbarium. It seems to be quite hardy and of easy culture, and has ripened seeds.

Stems erect, forked, thickly clothed with unequal villous hairs, as are the petioles, peduncles, and calyx. Leaves deeply 5-lobed, hairy on both sides, very rough to the touch: segments broadly wedge-shaped or ovate, unequally toothed with bluntish teeth, much veined underneath. Petioles bent, slightly flattened on the upper side and rounded on the lower, swollen at the base. Peduncles cylindrical, 2-taper-pointed. Bractles generally of six bristles: bristles very short, lanceolate, acute, concave, fringed. Petals longer than the calyx, villous. Sepals 5, oblong, concave, with fringed membranaceous margins, and terminated with a blunt fringed aristula. Petals 5, longer than the calyx, nearly orbicular, rugose, in var. of a bright blue, in 3. of a pale blue, lightest round the edges. Filaments 10, inserted at the base, of a dark purple, thickly clothed about half way up with long white hairs, and all bearing perfect anthers. Ovary more clothed with long white hairs: ovules hairy. Style smooth. Stigma 5, blunt, reflexed.



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J. Waller sc.

PELARGONIUM aurantiacum.

Orange-coloured Stork's-bill. α . et β .

P. aurantiacum, umbellis multifloris paniculatis, foliis cordatis lobatis inæqualiter obtuse dentatis molli-
bus, stipulis ovato-lanceolatis acutis ciliatis, caule
petiolis pedunculisque villosis.

Pelargonium foliaceum. Hortulanorum.

α . *undulatum*, foliis undulatis subtrifidis magisque lo-
batis, *fig. a.*

β . *planifolium*, foliis planis obsolete lobatis, *fig. b.*

Stem shrubby, flexuose, not much branched; *branches* rather succulent, uneven, thickly clothed with long villous unequal hairs, as are the petioles, peduncles, and calyx. *Leaves* cordate, more or less lobed, very unequally and deeply toothed, thickly clothed on both sides with short soft villous down, strongly nerved underneath and furrowed above. *Petioles* very long, flattened on the upper side and convex on the lower, widened at the base. *Stipules* ovately lanceolate or nearly cordate, acute, ciliate. *Peduncles* panicled, many-flowered. *Involucre* of several elliptically lanceolate bractes, that are fringed and slightly keeled. *Pedicles* scarcely as long as the bractes. *Calyx* 5-cleft, upper segment erect, elliptically lanceolate, keeled; the others lanceolate, acute, slightly reflexed. *Petals* 5, of a reddish orange-colour, the two upper ones ob-ovate, oblique at the base, and marked with numerous dark purple stripes, which branch in all directions; lower petals ligulate, spreading, of rather a lighter colour. *Filaments* 10, united at the base, seven bearing anthers, which in the specimens that we have seen

have always been imperfect. *Style* of a pale colour, very hairy. *Stigmas* 5, purple, reflexed.

In *var. α.* the leaves are deeply lobed, or nearly trifid and undulate, with sharper teeth; the upper petals are more stained with purple in the centre, and the nectariferous tube is about the length of the calyx.

In *var. β.* the leaves are flat, less lobed, and bluntly toothed; and the nectariferous tube is half as long again as the calyx.

Both the varieties of these handsome plants were raised from seeds by Mr. Smith, at the Earl of Liverpool's, Coombe Wood, but he was not quite certain of their origin; this is now ascertained, by a plant that flowered this last summer at Mr. Colvill's, which differed not in the least from the *β. var.* It was raised from the seed of *P. calycinum* that had been fertilized with the pollen of *P. fulgidum*. They are very desirable plants for collections, on account of their abundance of bloom, the whole plant being generally covered with flowers at the same time; but they must be considered as autumnal bloomers, as they seldom come in flower till late in summer. Like their nearest relatives, they succeed well in a mixture of turfy loam, peat, and sand; requiring but little water in winter, and the warmest part of the greenhouse. Cuttings root freely, planted in pots and placed on a shelf in the greenhouse.



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J. Watts. sc.

MONSONIA pilosa.

Hairy Monsonia.

M. pilosa, foliis quinquepartito-palmatis: laciniis tripartito-pinnatifidis: subtus petiolisque pilosis, petalis dentatis. *Willden. enum.* 2. 717.

Monsonia pilosa. *Hort. sub. lond.* p. 153. *Link enum.* 2. p. 199.

Monsonia Filia. *Andrews's bot. rep.* 276, *nec aliorum.*

Geranium Monsonia. *Thunberg.*

Stem suffruticose, branching; *branches* straggling, slender, thickly clothed with long white spreading hairs, as are the petioles, peduncles, and calyx. *Leaves* palmately 5-parted or pinnatifid, smooth and shining on the upper side and hairy underneath; segments 3-parted, pinnatifid or deeply divided, bluntish, fringed. *Petioles* long and slender, with two subulate, membranaceous, fringed stipules attached to their base. *Peduncle* 1-flowered, longer than the leaves. *Involucre* of several linear, taper-pointed, fringed bractes, about half way up the peduncle. *Calyx* of 5 sepals; *sepals* lanceolate, bluntish, with membranaceous margins. *Petals* 5, obovate, deeply toothed with five large unequal teeth, of a pale cream-colour, tinged with red near the base and at the back: *unguis* hairy on the inside. *Stamens* 15, in five sets, all united at the base: *anthers* incumbent: *pollen* orange-coloured. *Germens* villous: *aristæ* hairy. *Stigmas* 5, blunt, dark purple, slightly reflexed.

This handsome species is generally known by the name of *M. Filia* in the gardens, but it is very dif-

ferent from *M. Filia* of Linnæus, which approaches much nearer to *M. lobata*; but we think it can scarcely be the same species. The present plant is not uncommon in collections, though we seldom see it in flower; which is much to be regretted, as its flowers are very handsome, and each lasts in bloom several days.

The plant from which our drawing and description were taken, was kindly communicated to us from the magnificent collection of Geraniaceæ belonging to R. Henry Jenkinson, Esq. It flourishes well in an equal mixture of turfy loam, peat, and sand, and is readily propagated by cuttings or pieces of the root, requiring only a common greenhouse, with plenty of air, and but little water in winter.

Stem suffrutescent, branching; branches spreading, slender, thickly clothed with long white spreading hairs, as are the petioles, peduncles, and calyx. *Leaves* palmately 5-parted or pinnatifid, smooth and shining on the upper side and hairy underneath; segments 3-parted, pinnatifid or deeply divided, bluish, fringed. *Petioles* long and slender, with two subulate, membranaceous, fringed stipules attached to their base. *Peduncles* 1-flowered, longer than the leaves. *Bracts* of several linear, taper-pointed, fringed bristles, about half way up the peduncle. *Calyx* of 5 sepals; sepals lanceolate, bluish, with membranaceous margins. *Petals* 5, obovate, deeply toothed with five large unequal teeth, of a pale cream-colour, tinged with red near the base and at the back; wavy hairy on the inside. *Stamens* 15, in five sets, all united at the base; anthers incumbent; pollen orange-coloured. *Germens* villous; style hairy. *Stigmas* 5, blunt, dark purple, slightly reflexed.

This handsome species is generally known by the name of *M. Filia* in the gardens, but it is very dif-





E. D. Smith. del.

Pub by J. Ridgway 170 Piccadilly Feb. 1. 1824.

J. Maitland sc.

ERODIUM Gussonii.

Gussone's Heron's-bill.

E. Gussonii, umbellis plurifloris, foliis cordatis lobatis crenulatis mollissime tomentosis: caule petiolis pedunculisque villosissimis; pilis reflexis, stipulis maximis scariosis.

Erodium Gussonii. *Tenore prodr. fl. neap. p. 39. Botan. magaz. 2445.*

Erodium Gussoni. *Flor. neap. p. 97. t. 63. Tenore hort. reg. neap. p. 38.*

Erodium Goussoni. *Link enum. 2. p. 185.*

Perennial. Herbaceous. Stems ascending, thickly clothed with reflexed hairs. *Leaves* cordate, ovate, bluntly rounded, entire, 3 to 5-lobed, crenulate, softly tomentose, the sinuses of the bottom ones overlapping at the base: lobes bluntly rounded. *Petioles* very thick, slightly flattened and furrowed on the upper side and rounded on the lower, thickly clothed with white reflexed villous hairs. *Stipules* large, red, membranaceous, scariose, bluntly rounded. *Peduncles* longer than the leaves, thickly clothed with reflexed villous hairs. *Umbels* several-flowered. *Involucre* of 2 or 3 large concave, cordate, membranaceous, scariose bractes. *Pedicles* long and slender, clothed with short white hairs. *Calyx* of 5 sepals, which are unequal, oblong, concave, plaited or channelled, blunt, but terminated with a short rigid arista inserted a little below the point. *Petals* 5, unequal in size, nearly double the length of the calyx, the lowermost rather largest, a little wrinkled, of a rosy purple, the two upper ones marked a little above the base with a large

darker patch : unguis bearded. *Filaments* 10, united and bearded at the base, five only bearing anthers: *pollen* orange-coloured. *Stigmas* 5, sessile.

This beautiful species of *Erodium* was raised at the Nursery of Mr. Colvill, in the autumn of 1822, from seeds sent him by Mr. Otto, Curator of the Botanical Garden at Berlin. It is a native of Sicily, and we expect it will prove quite hardy. Plants raised from seeds in spring will flower late in autumn, and, if kept in a greenhouse, will continue to flower nearly all the winter. It is a very proper plant for adorning rock-work, where it would appear to great advantage, thriving well in the common garden soil; or a mixture of sandy loam and peat, or decayed leaves, suits it very well. Cuttings root freely. It also ripens plenty of seeds, if some pollen be attached to the stigmas when in bloom.

Our drawing was taken from a plant when it first flowered, which we consider its most perfect state. The figure of the Botanical Magazine was from a side branch, so that the habit of the plant could not be seen.

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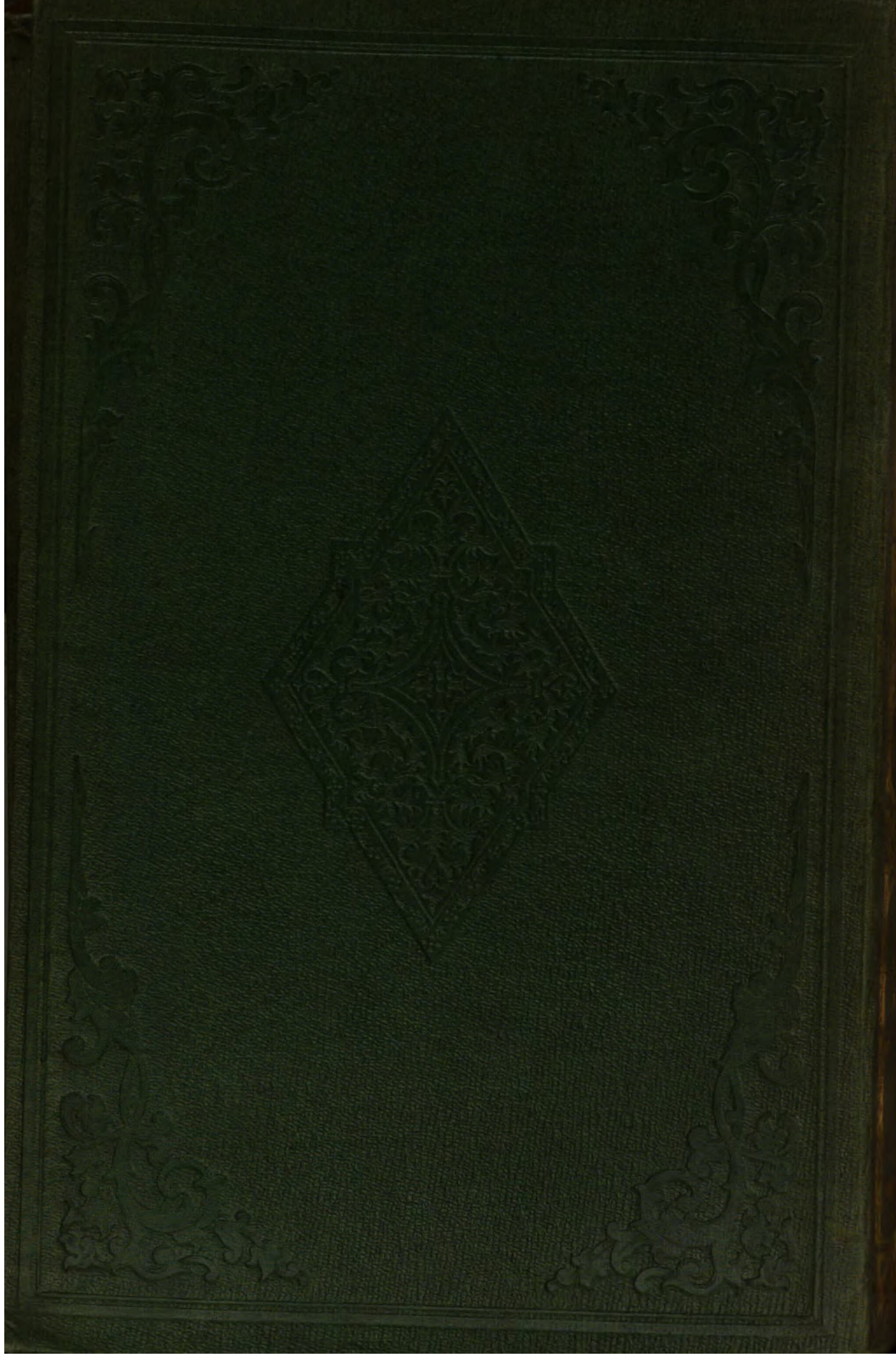
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